Analytical and Quality Control Report

William Little WTS P.O. Box 363 Building 126 3RD Floor WSMR, NM, 88002

Report Date: January 5, 2007

Work Order: 6121321

Project Name:

HELSTF Groundwater Samples

Project Number: 7

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
111614	HLSF-0085-HMW-023-1206	water	2006-12-11	10:12	2006-12-12
111615	HLSF-0085-TB-786-1206	water	2006-12-11	10:12	2006-12-12

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 56 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Michael abel

Standard Flags

 $\, B \,$ - The sample contains less than ten times the concentration found in the method blank.

7

Analytical Report

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Ag, Dissolved QC Batch: 32994

28613

Prep Batch:

Analytical Method: Date Analyzed: Sample Preparation:

S 6010B 2006-12-20 2006-12-18 Prep Method: S 3005A Analyzed By: RR Prepared By: TS

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RL

Parameter Flag Result Units Dilution RLDissolved Silver < 0.00200 mg/L 0.00200

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Ag, Total QC Batch: 33098 Prep Batch: 28574

Analytical Method: Date Analyzed: Sample Preparation:

S 6010B 2006-12-26 2006-12-15 Prep Method: S 3010A Analyzed By: RR Prepared By: TS

RL

Parameter Flag Result Units Dilution RLTotal Silver < 0.00200 mg/L 0.00200

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Alkalinity OC Batch: 32918 Prep Batch: 28627

Analytical Method: SM 2320B Date Analyzed: 2006-12-15 Sample Preparation: 2006-12-15

Prep Method: Analyzed By: JG Prepared By: JR

N/A

RL Parameter Flag Result Units Dilution RLHydroxide Alkalinity <1.00 mg/L as CaCo3 1.00 Carbonate Alkalinity < 1.00mg/L as CaCo3 1 1.00 Bicarbonate Alkalinity 68.0 mg/L as CaCo3 1 4.00 Total Alkalinity 68.0 mg/L as CaCo3 1 4.00

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Ammonia QC Batch: 32786 Prep Batch: 28518

Analytical Method: Date Analyzed:

SM 4500-NH3 B,C 2006-12-13

2006-12-13

Prep Method: N/A Analyzed By: SM Prepared By: SM

RL

Sample Preparation:

Parameter Flag Result Units Dilution RLAmmonia-N <1.00 mg/L 1.00

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Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: OC Batch: As, Dissolved

32994 Prep Batch: 28613

Analytical Method:

S 6010B Date Analyzed: 2006-12-20 Sample Preparation: 2006-12-18 Prep Method:

S 3005A Analyzed By: RR Prepared By: TS

RL

Parameter Dissolved Arsenic Flag Result < 0.00500

Units mg/L Dilution 1

RL0.00500

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: QC Batch:

As, Total 33098 Prep Batch: 28574

Analytical Method: Date Analyzed:

S 6010B 2006-12-26 2006-12-15 Prep Method: S 3010A

Analyzed By: RR Prepared By: TS

RL

Sample Preparation:

Parameter Total Arsenic Flag

Result < 0.0100 Units mg/L

Dilution

RL

0.0100

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: QC Batch:

Dissolved Barium

Ba, Dissolved

32994 Prep Batch: 28613 Analytical Method: Date Analyzed:

Sample Preparation:

RL

S 6010B 2006-12-20 2006-12-18 Prep Method: S 3005A Analyzed By:

RR Prepared By: TS

Parameter Flag

Result 0.0100

Units mg/L Dilution

RL 0.0100

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: OC Batch:

Prep Batch:

Ba, Total 33098

28574

Analytical Method: Date Analyzed: Sample Preparation:

S 6010B 2006-12-26 2006-12-15 Prep Method: S 3010A Analyzed By: RR

Prepared By: TS

RL

Parameter Total Barium Flag

Result 0.0100 Units

mg/L

Dilution

RL

0.0100

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: OC Batch:

Prep Batch:

Bromide (IC)

Analytical Method: 33182 Date Analyzed: 28842 Sample Preparation:

E 300.0 2006-12-27 2006-12-27 Prep Method: N/A Analyzed By: WB

Prepared By:

WB

RL

Parameter Flag Bromide

Result <1.00 Units mg/L Dilution 5

RL0.200

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Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Cd, Dissolved QC Batch: 32994 Prep Batch: 28613 Analytical Method: S 6010B Date Analyzed: 2006-12-20 Sample Preparation: 2006-12-18

Prep Method: S 3005A Analyzed By: RR Prepared By: TS

RL

ParameterFlagResultUnitsDilutionRLDissolved Cadmium<0.00100</td>mg/L10.00100

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Cd, Total QC Batch: 33098 Prep Batch: 28574 Analytical Method: S 6010B
Date Analyzed: 2006-12-26
Sample Preparation: 2006-12-15

Prep Method: S 3010A Analyzed By: RR Prepared By: TS

RL

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Conductivity QC Batch: 32909 Prep Batch: 28617 Analytical Method: SM 2510B
Date Analyzed: 2006-12-13
Sample Preparation: 2006-12-13

Prep Method: N/A
Analyzed By: DR
Prepared By: JR

RL

 Parameter
 Flag
 Result
 Units
 Dilution
 RL

 Specific Conductance
 11200
 μMHOS/cm
 1
 0.00

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Cr, Dissolved QC Batch: 32994
Prep Batch: 28613

Analytical Method: S 6010B
Date Analyzed: 2006-12-20
Sample Preparation: 2006-12-18

Prep Method: S 3005A Analyzed By: RR Prepared By: TS

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Cr, Total QC Batch: 33098 Prep Batch: 28574

Analytical Method: S 6010B
Date Analyzed: 2006-12-26
Sample Preparation: 2006-12-15

Prep Method: S 3010A Analyzed By: RR Prepared By: TS

RL

Work Order: 6121321 **HELSTF** Groundwater Samples Page Number: 5 of 56

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: QC Batch: Cu, Dissolved

32994 Prep Batch: 28613

Analytical Method:

Date Analyzed: Sample Preparation:

S 6010B 2006-12-20

2006-12-18

Prep Method: S 3005A Analyzed By: RR

Prepared By: TS

RL

Parameter Dissolved Copper

Result < 0.0125

Units mg/L Dilution

RL0.0125

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis:

Cu, Total 33098

Analytical Method: Date Analyzed:

S 6010B 2006-12-26 Prep Method:

S 3010A

OC Batch: Prep Batch:

28574

Sample Preparation:

2006-12-15

Analyzed By: Prepared By:

RR TS

RL

Parameter Total Copper

Flag

Flag

Result < 0.00500 Units mg/L

Dilution

RL

0.00500

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: QC Batch:

Prep Batch:

Hg, Total

32862 28579 Analytical Method: Date Analyzed:

S 7470A

2006-12-15 2006-12-14 Prep Method: N/A

Analyzed By: TS Prepared By: TS

RL

Sample Preparation:

Parameter

Total Mercury

Flag Result < 0.000200

Units mg/L Dilution

RL

0.000200

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis:

Prep Batch:

OC Batch: 33006 Prep Batch: 28666 QC Batch:

28842

Ion Chromatography

33182

Analytical Method: Date Analyzed:

Date Analyzed:

Sample Preparation:

E 300.0 2006-12-15 Sample Preparation: 2006-12-15

2006-12-27 2006-12-27 Prep Method: N/A Analyzed By: WB

Prepared By: WB Analyzed By: WB Prepared By: WB

RL

Parameter Flag Result Units Dilution RL Chloride 1480 mg/L 50 0.500 Fluoride 3.78 mg/L 5 0.200 Sulfate 5890 mg/L 500 0.500

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: QC Batch: Prep Batch: Na, Dissolved 33035

28613

Analytical Method: Date Analyzed: Sample Preparation:

S 6010B 2006-12-21 2006-12-18 Prep Method: S 3005A Analyzed By: RR

Prepared By: TS

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RL Parameter Flag Result Units Dilution RL Dissolved Sodium 2000 mg/L 10 0.500 Sample: 111614 - HLSF-0085-HMW-023-1206 Analysis: Na. Total Analytical Method: S 6010B Prep Method: S 3010A QC Batch: 33125 Date Analyzed: 2006-12-27 Analyzed By: RR Prep Batch: 28574 Sample Preparation: 2006-12-15 Prepared By: TS RLParameter Flag Result Units Dilution RLTotal Sodium 2100 mg/L 0.500 Sample: 111614 - HLSF-0085-HMW-023-1206 Analysis: Nitrate and Nitrite as N Analytical Method: E 353.3 Prep Method: N/A QC Batch: 33128 Date Analyzed: 2006-12-26 Analyzed By: JS Prep Batch: 28801 Sample Preparation: 2006-12-26 Prepared By: JS RLParameter Flag Result Units Dilution RL Nitrate and Nitrite as N 56.9 mg/L 500 0.100 Sample: 111614 - HLSF-0085-HMW-023-1206 Analysis: NO2 (IC) Analytical Method: E 300.0 Prep Method: N/A OC Batch: 33182 Date Analyzed: 2006-12-27 Analyzed By: WB Prep Batch: 28842 Sample Preparation: 2006~12-27 Prepared By: WB RLParameter Flag Result Units Dilution RLNitrite-N <1.00 mg/L 5 0.200

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: QC Batch: Prep Batch:	33006	Analytical Method: Date Analyzed: Sample Preparation:	E 300.0 2006-12-15 2006-12-15	Prep Method: Analyzed By: Prepared By:	WB
		DI			

		KL			
Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		65.5	mg/L	50	0.200

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Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: P, Total QC Batch: 33098 Prep Batch: 28574 Analytical Method: S 6010B
Date Analyzed: 2006-12-26
Sample Preparation: 2006-12-15

Prep Method: S 3010A Analyzed By: RR Prepared By: TS

RL

ParameterFlagResultUnitsDilutionRLTotal Phosphorous<0.0500</td>mg/L10.0500

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Pb, Dissolved QC Batch: 32994
Prep Batch: 28613

Analytical Method: S 6010B
Date Analyzed: 2006-12-20
Sample Preparation: 2006-12-18

Prep Method: S 3005A Analyzed By: RR Prepared By: TS

RL

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Pb, Total QC Batch: 33098 Prep Batch: 28574 Analytical Method: S 6010B
Date Analyzed: 2006-12-26
Sample Preparation: 2006-12-15

Prep Method: S 3010A Analyzed By: RR Prepared By: TS

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: pH QC Batch: 32903 Prep Batch: 28611 Analytical Method: SM 4500-H+
Date Analyzed: 2006-12-12
Sample Preparation: 2006-12-12

Prep Method: N/A
Analyzed By: JG
Prepared By: JR

RL

0.00500

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Se, Dissolved QC Batch: 32994
Prep Batch: 28613

Analytical Method: S 6010B
Date Analyzed: 2006-12-20
Sample Preparation: 2006-12-18

Prep Method: S 3005A Analyzed By: RR Prepared By: TS

RL

ParameterFlagResultUnitsDilutionRLDissolved Selenium<0.0100</td>mg/L10.0100

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Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: QC Batch: Se, Total 33098

Analytical Method:

S 6010B 2006-12-26

2006-12-15

Prep Method: Analyzed By:

S 3010A

Prep Batch: 28574

Date Analyzed: Sample Preparation:

Prepared By:

RR TS

RL

Parameter Total Selenium

Result Flag < 0.0100

Flag

Units mg/L Dilution

RL0.0100

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis:

TDS

Analytical Method:

SM 2540C

Prep Method: N/A

QC Batch:

33073

Date Analyzed:

2006-12-22

Analyzed By:

JG

Prep Batch:

28749

Sample Preparation:

2006-12-14

Prepared By:

JR

RL

Parameter Total Dissolved Solids Result 10000 Units mg/L Dilution

RL

5.00

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis:

Volatiles WTS

Analytical Method:

S 8260B

Prep Method: Analyzed By:

S 3510C JG

QC Batch: Prep Batch: 32895 28606 Date Analyzed: Sample Preparation:

2006-12-16 2006-12-16

Prepared By: JG

RL

Parameter	Flag	Result	Units	Dilution	RL
Bromochloromethane		<1.00	μg/L	1	1.00
Dichlorodifluoromethane		<1.00	μ g/L	1	1.00
Chloromethane (methyl chloride)		< 1.00	$\mu \mathrm{g}/\mathrm{L}$	1	1.00
Vinyl Chloride		< 1.00	μ g/L	1	1.00
Bromomethane (methyl bromide)		< 5.00	μ g/L	1	5.00
Chloroethane		< 1.00	$\mu \mathrm{g/L}$	1	1.00
Trichlorofluoromethane		<1.00	μ g/L	1	1.00
Acetone		< 10.0	μ g/L	1	10.0
Iodomethane (methyl iodide)		< 5.00	μ g/L	1	5.00
Carbon Disulfide		<1.00	μ g/L	1	1.00
Acrylonitrile		<1.00	μ g/L	1	1.00
2-Butanone (MEK)		< 5.00	μ g/L	1	5.00
4-Methyl-2-pentanone (MIBK)		< 5.00	μ g/L	1	5.00
2-Hexanone		< 5.00	μ g/L	1	5.00
trans 1,4-Dichloro-2-butene		< 10.0	μ g/L	1	10.0
1,1-Dichloroethene		< 1.00	μ g/ $ m L$	1	1.00
Methylene chloride		< 5.00	μ g/L	1	5.00
MTBE		< 1.00	μ g/L	1	1.00
trans-1,2-Dichloroethene		< 1.00	$\mu \mathrm{g/L}$	1	1.00
1,1-Dichloroethane		< 1.00	μ g/L	1	1.00
cis-1,2-Dichloroethene		< 1.00	μ g/L	1	1.00
2,2-Dichloropropane		< 1.00	μg/L	1	1.00
1,2-Dichloroethane (EDC)		< 1.00	μg/L	ĺ	1.00

continued . . .

sample 111614 continued...

Parameter Flag Result Units Dilution RL			RL			
1,1-Trichloroethane	Parameter	Flag		Units	Dilution	RL
1,1,1-Trichloroethane	Chloroform		5.22	μg/L	1	1.00
1.1-Dichloropropene	1,1,1-Trichloroethane		< 1.00		1	1.00
Benzene	1,1-Dichloropropene		< 1.00		1	1.00
Carbon Tetrachloride < 1,00	Benzene		<1.00		1	1.00
1,2-Dickloropropane Comment Co	Carbon Tetrachloride		<1.00		1	1.00
Trichloroethene (TCE) < 1,00 μg/L 1 1,00 Dibromomethane (methylene bromide) < 1,00	1,2-Dichloropropane		<1.00		1	1.00
Dibromomethane (methylene bromide)	Trichloroethene (TCE)		<1.00		1	1.00
Stromodichloromethane	Dibromomethane (methylene bromide)		<1.00		1	1.00
2-Chloroethyl vinyl ether <5.00	Bromodichloromethane		<1.00		1	1.00
cis-1_3-Dichloropropene <1.00	2-Chloroethyl vinyl ether		< 5.00		1	5.00
trans-1,3-Dichloropropene <1.00 µg/L 1 1.00 Toluene <1.00	cis-1,3-Dichloropropene		<1.00		1	1.00
Tolluene <1.00 µg/L 1 1.00 1,1,2-Trichloroethane <1.00	trans-1,3-Dichloropropene		<1.00		1	1.00
1,12-Trichloroethane	Toluene		< 1.00		1	1.00
1,3-Dichloropropane <1.00	1,1,2-Trichloroethane		<1.00		1	1.00
Dibromochlaromethane C1.00	1,3-Dichloropropane		<1.00		1	1.00
1,2-Dibromoethane (EDB)	Dibromochloromethane		<1.00		1	1.00
Tetrachloroethene (PCE)	1,2-Dibromoethane (EDB)		< 1.00		1	1.00
Chlorobenzene <1.00 µg/L 1 1.00 1,1,2-Tetrachloroethane <1.00	Tetrachloroethene (PCE)		< 1.00		1	1.00
1,1,2-Tetrachloroethane	Chlorobenzene		< 1.00		1	1.00
Ethylbenzene <1.00 µg/L 1 1.00 m,p-Xylene <1.00	1,1,1,2-Tetrachloroethane		<1.00		1	1.00
mp-Xylene <1.00 μg/L 1 1.00 Bromoform <1.00	Ethylbenzene		< 1.00		1	1.00
Bromoform <1.00 µg/L 1 1.00 Styrene <1.00	m,p-Xylene		<1.00		1	1.00
Styrene <1.00 µg/L 1 1.00 o-Xylene <1.00	Bromoform		<1.00		1	1.00
o-Xylene <1.00 μg/L 1 1.00 1,1,2,2-Tetrachloroethane <1.00	Styrene		< 1.00		1	1.00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	o-Xylene		< 1.00		1	1.00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1,1,2,2-Tetrachloroethane		< 1.00		1	1.00
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2-Chlorotoluene		< 1.00		1	1.00
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1,2,3-Trichloropropane		< 1.00		1	1.00
Bromobenzene <1.00 μg/L 1 1.00 n-Propylbenzene <1.00	Isopropylbenzene		< 1.00	$\mu { m g/L}$	1	1.00
n-Propylbenzene <1.00 $\mu g/L$ 1 1.00 $1,3,5$ -Trimethylbenzene <1.00 $\mu g/L$ 1 1.00 $1,2,4$ -Trimethylbenzene <1.00 $\mu g/L$ 1 1.00 $1,4$ -Dichlorobenzene (para) <1.00 $\mu g/L$ 1 1.00 $1,4$ -Dichlorobenzene (para) <1.00 $\mu g/L$ 1 1.00 $1,3$ -Dichlorobenzene (meta) <1.00 $\mu g/L$ 1 1.00 $1,4$ -Chlorotoluene <1.00 $\mu g/L$ 1 1.00 $1,2$ -Dichlorobenzene (ortho) <1.00 $\mu g/L$ 1 1.00 $1,2,2$ -Dichlorobenzene (ortho) <1.00 $\mu g/L$ 1 1.00 $1,2,3$ -Trichlorobenzene <5.00 $\mu g/L$ 1 5.00	Bromobenzene		< 1.00		l	1.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	n-Propylbenzene		< 1.00	μg/L	1	1.00
1,2,4-Trimethylbenzene <1.00 $\mu g/L$ 1 1.00 1,4-Dichlorobenzene (para) <1.00 $\mu g/L$ 1 1.00 sec-Butylbenzene <1.00 $\mu g/L$ 1 1.00 1,3-Dichlorobenzene (meta) <1.00 $\mu g/L$ 1 1.00 p-Isopropyltoluene <1.00 $\mu g/L$ 1 1.00 4-Chlorotoluene <1.00 $\mu g/L$ 1 1.00 1,2-Dichlorobenzene (ortho) <1.00 $\mu g/L$ 1 1.00 n-Butylbenzene <1.00 $\mu g/L$ 1 1.00 1,2-Dibromo-3-chloropropane <1.00 $\mu g/L$ 1 1.00 1,2,3-Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 1,2,4-Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 Naphthalene <5.00 $\mu g/L$ 1 5.00 Hexachlorobutadiene <5.00 $\mu g/L$ 1 5.00 Isopropyl Alcohol <5.00 $\mu g/L$ 1 5.00 Tert-butyl Alcohol <5.00	1,3,5-Trimethylbenzene		<1.00		1	1.00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	tert-Butylbenzene		< 1.00	μg/L	1	1.00
sec-Butylbenzene <1.00 $\mu g/L$ 1 1.00 $1,3$ -Dichlorobenzene (meta) <1.00 $\mu g/L$ 1 1.00 p-Isopropyltoluene <1.00 $\mu g/L$ 1 1.00 4-Chlorotoluene <1.00 $\mu g/L$ 1 1.00 $1,2$ -Dichlorobenzene (ortho) <1.00 $\mu g/L$ 1 1.00 $1,2$ -Dibromo-3-chloropropane <1.00 $\mu g/L$ 1 1.00 $1,2,3$ -Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 $1,2,4$ -Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 $1,2,4$ -Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 Naphthalene <5.00 $\mu g/L$ 1 5.00 Hexachlorobutadiene <5.00 $\mu g/L$ 1 5.00 Isopropyl Alcohol <5.00 $\mu g/L$ 1 5.00 Tert-butyl Alcohol <5.00 $\mu g/L$ 1 5.00	1,2,4-Trimethylbenzene		< 1.00	$\mu { m g/L}$	1	1.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1,4-Dichlorobenzene (para)		< 1.00	μ g/L	l	1.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	sec-Butylbenzene		< 1.00	μg/L	1	1.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1,3-Dichlorobenzene (meta)		< 1.00		1	1.00
1,2-Dichlorobenzene (ortho) <1.00 $\mu g/L$ 1 1.00 n-Butylbenzene <1.00 $\mu g/L$ 1 1.00 1,2-Dibromo-3-chloropropane <5.00 $\mu g/L$ 1 5.00 1,2,3-Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 1,2,4-Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 Naphthalene <5.00 $\mu g/L$ 1 5.00 Hexachlorobutadiene <5.00 $\mu g/L$ 1 5.00 Isopropyl Alcohol <5.00 $\mu g/L$ 1 5.00 Tert-butyl Alcohol <5.00 $\mu g/L$ 1 5.00	p-Isopropyltoluene		<1.00	$\mu \mathrm{g}/\mathrm{L}$	1	1.00
1,2-Dichlorobenzene (ortho) <1.00 $\mu g/L$ 1 1.00 n-Butylbenzene <1.00 $\mu g/L$ 1 1.00 1,2-Dibromo-3-chloropropane <5.00 $\mu g/L$ 1 5.00 1,2,3-Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 1,2,4-Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 Naphthalene <5.00 $\mu g/L$ 1 5.00 Hexachlorobutadiene <5.00 $\mu g/L$ 1 5.00 Isopropyl Alcohol <5.00 $\mu g/L$ 1 5.00 Tert-butyl Alcohol <5.00 $\mu g/L$ 1 5.00	4-Chlorotoluene		< 1.00		1	1.00
n-Butylbenzene <1.00 μ g/L 1 1.00 1,2-Dibromo-3-chloropropane <5.00 μ g/L 1 5.00 1,2,3-Trichlorobenzene <5.00 μ g/L 1 5.00 1,2,4-Trichlorobenzene <5.00 μ g/L 1 5.00 Naphthalene <5.00 μ g/L 1 5.00 Hexachlorobutadiene <5.00 μ g/L 1 5.00 Isopropyl Alcohol <5.00 μ g/L 1 5.00 Tert-butyl Alcohol <5.00 μ g/L 1 5.00	1,2-Dichlorobenzene (ortho)		< 1.00		1	1.00
1,2-Dibromo-3-chloropropane <5.00 $\mu g/L$ 1 5.00 1,2,3-Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 1,2,4-Trichlorobenzene <5.00 $\mu g/L$ 1 5.00 Naphthalene <5.00 $\mu g/L$ 1 5.00 Hexachlorobutadiene <5.00 $\mu g/L$ 1 5.00 Isopropyl Alcohol <5.00 $\mu g/L$ 1 5.00 Tert-butyl Alcohol <5.00 $\mu g/L$ 1 5.00	n-Butylbenzene		< 1.00		1	1.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1,2-Dibromo-3-chloropropane		< 5.00		1	5.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1,2,3-Trichlorobenzene		< 5.00		1	5.00
Naphthalene <5.00 $\mu g/L$ 1 5.00 Hexachlorobutadiene <5.00 $\mu g/L$ 1 5.00 Isopropyl Alcohol <5.00 $\mu g/L$ 1 5.00 Tert-butyl Alcohol <5.00 $\mu g/L$ 1 5.00	1,2,4-Trichlorobenzene		< 5.00		1	5.00
Hexachlorobutadiene <5.00 $μg/L$ 1 5.00 Isopropyl Alcohol <5.00 $μg/L$ 1 5.00 Tert-butyl Alcohol <5.00 $μg/L$ 1 5.00	· ·				1	
Isopropyl Alcohol <5.00 $\mu g/L$ 1 5.00 Tert-butyl Alcohol <5.00 $\mu g/L$ 1 5.00					1	
Tert-butyl Alcohol <5.00 μ g/L 1 5.00	Isopropyl Alcohol				1	
· · · · · · · · · · · · · · · · · · ·	, , , ,				1	
	•				1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.1	μg/L	1	50.0	104	82.4 - 115
Toluene-d8		51.3	μ g/L	1	50.0	103	89.7 - 108
4-Bromofluorobenzene (4-BFB)		44.3	$\mu \mathrm{g/L}$	1	50.0	89	84.6 - 114

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Zn, Dissolved QC Batch: 32994 Prep Batch: 28613

Analytical Method: S 6010B Date Analyzed: 2006-12-20 Sample Preparation: 2006-12-18

Prep Method: S 3005A Analyzed By: RR Prepared By: TS

Page Number: 10 of 56

RL Parameter Flag Result Units Dilution RLDissolved Zinc < 0.00500 mg/L 0.00500

Sample: 111614 - HLSF-0085-HMW-023-1206

Analysis: Zn, Total QC Batch: 33098 Prep Batch: 28574

Analytical Method: S 6010B Date Analyzed: 2006-12-26 Sample Preparation: 2006-12-15

Prep Method: S 3010A Analyzed By: RR Prepared By: TS

RL Parameter Flag Result Units Dilution RLTotal Zinc < 0.00500 mg/L 0.00500

Sample: 111615 - HLSF-0085-TB-786-1206

Analysis: Volatiles WTS QC Batch: 33096 Prep Batch: 28772

Analytical Method: S 8260B Date Analyzed: 2006-12-20 Sample Preparation: 2006-12-20

Prep Method: S 3510C Analyzed By: JG Prepared By: JG

		RL			
Parameter	Flag	Result	Units	Dilution	RL
Bromochloromethane	7 There	<1.00	μg/L	1	1.00
Dichlorodifluoromethane		< 1.00	μ g/L	1	1.00
Chloromethane (methyl chloride)		< 1.00	µg/L]	1.00
Vinyl Chloride		< 1.00	μ g/L	1	1.00
Bromomethane (methyl bromide)		< 5.00	μ g/L]	5.00
Chloroethane		<-1.00	$\mu { m g/L}$	1	1.00
Trichlorofluoromethane		< 1.00	μ g/L	1	1.00
Acetone		< 10.0	$\mu \mathrm{g/L}$	j	10.0
Iodomethane (methyl iodide)		< 5.00	μ g/L	1	5.00
Carbon Disulfide		< 1.00	μ g/L	1	1.00
Acrylonitrile		< 1.00	μg/L]	1.00
2-Butanone (MEK)		< 5.00	μ g/L	j	5.00
4-Methyl-2-pentanone (MIBK)		< 5.00	μ g/L	j	5.00
2-Hexanone		< 5.00	μg/L	1	5.00
trans 1,4-Dichloro-2-butene		< 10.0	μ g/L	1	10.0
1,1-Dichloroethene		<1.00	μg/L	1	1.00

continued . . .

sample 111615 continued ...

		RL			
Parameter	Flag	Result	Units	Dilution	RL
Methylene chloride		< 5.00	μg/L	1	5.00
MTBE		<1.00	$\mu { m g/L}$]	1.00
trans-1,2-Dichloroethene		< 1.00	μ g/L	1	1.00
1,1-Dichloroethane		< 1.00	$\mu { m g/L}$	1	1.00
cis-1,2-Dichloroethene		< 1.00	$\mu \mathrm{g}/\mathrm{L}$	1	1.00
2,2-Dichloropropane		< 1.00	μ g/L	1	1.00
1,2-Dichloroethane (EDC)		< 1.00	μg/L	1	1.00
Chloroform		< 1.00	μg/L	1	1.00
1,1,1-Trichloroethane		< 1.00	μg/L	1	1.00
1,1-Dichloropropene		<1.00	μg/L	1	1.00
Benzene		<1.00	μg/L	1	1.00
Carbon Tetrachloride		<1.00	μg/L	î 1	1.00
1,2-Dichloropropane		< 1.00	μg/L	1	1.00
Trichloroethene (TCE)		<1.00	μg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	μg/L	1	1.00
Bromodichloromethane		<1.00	μg/L	1	1.00
2-Chloroethyl vinyl ether		< 5.00	μg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	μg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	μg/L	1	1.00
Toluene		<1.00	μg/L	1	1.00
1,1,2-Trichloroethane		<1.00	μg/L	1	1.00
1,3-Dichloropropane		<1.00	μg/L	1	1.00
Dibromochloromethane		<1.00	μg/L μg/L	i i	1.00
1,2-Dibromoethane (EDB)		<1.00	μg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	μ g/L	1	1.00
Chlorobenzene		<1.00	μg/L	, }	1.00
1,1,1,2-Tetrachloroethane		<1.00	μg/L	1	1.00
Ethylbenzene		<1.00	μg/L μg/L	1	1.00
m,p-Xylene		<1.00	μg/L	1	1.00
Bromoform		<1.00	μg/L μg/L	1	1.00
Styrene		<1.00	μg/L μg/L	1	1.00
o-Xylene		<1.00	μg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	μ g/L μ g/L	1	1.00
2-Chlorotoluene		<1.00	μ g/L μ g/L	1	1.00
1,2,3-Trichloropropane		<1.00	μg/L μg/L	1	1.00
Isopropylbenzene		<1.00	μg/L μg/L		
Bromobenzene		<1.00		1	1.00
n-Propylbenzene		<1.00	μg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	μg/L	1	1.00
tert-Butylbenzene		<1.00	μg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	μg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	μg/L	J	1.00
sec-Butylbenzene		<1.00	μg/L	1	1.00
1,3-Dichlorobenzene (meta)			μg/L	i	1.00
p-Isopropyltoluene		<1.00	$\mu g/L$	1	1.00
4-Chlorotoluene		<1.00	μg/L		1.00
1,2-Dichlorobenzene (ortho)		<1.00	μg/L	1	1.00
· · ·		<1.00	μg/L	1	1.00
n-Butylbenzene		<1.00	μg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	μg/L	1	5.00

continued...

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sample 111615 continued ...

		RL			
Parameter	Flag	Result	Units	Dilution	RL
1,2,3-Trichlorobenzene		< 5.00	μg/L	1	5.00
1,2,4-Trichlorobenzene		< 5.00	$\mu { m g/L}$	1	5.00
Naphthalene		< 5.00	μ g/L	1	5.00
Hexachlorobutadiene		< 5.00	$\mu \mathrm{g/L}$	1	5.00
Isopropyl Alcohol		< 5.00	μ g/L	1	5.00
Tert-butyl Alcohol		< 5.00	$\mu \mathrm{g}/\mathrm{L}$	1	5.00
1,4-Dioxane		< 5.00	μg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.4	μg/L	1	50.0	99	82.4 - 115
Toluene-d8		49.3	μ g/L	1	50.0	99	89.7 - 108
4-Bromofluorobenzene (4-BFB)		47.5	$\mu \mathrm{g}/\mathrm{L}$	1	50.0	95	84.6 - 114

Method Blank (1) QC Batch: 32786

QC Batch: 32786

Date Analyzed: 2006-12-13

Analyzed By: SM Prepared By: SM

Prep Batch: 28518

QC Preparation: 2006-12-13

Prepared By: S

		MDL		
Parameter	Flag	Result	Units	RL
Ammonia-N		< 0.820	mg/L	1

Method Blank (1) QC Batch: 32862

QC Batch: 32862 Prep Batch: 28579

Total Mercury

Date Analyzed: 2006-12-15 QC Preparation: 2006-12-15

< 0.0000217

Analyzed By: TS Prepared By: TS

Parameter Flag Result

 Units
 RL

 mg/L
 0.0002

Method Blank (1) QC Batch: 32895

QC Batch: 32895 Prep Batch: 28606 Date Analyzed: 2006-12-16 QC Preparation: 2006-12-16

Analyzed By: JG Prepared By: JG

		MDL		
Parameter	Flag	Result	Units	RL
Bromochloromethane		< 0.0699	μg/L	1
Dichlorodifluoromethane		< 0.0598	$\mu \mathrm{g/L}$	1
Chloromethane (methyl chloride)		< 0.230	$\mu \mathrm{g/L}$	1
Vinyl Chloride		< 0.0902	$\mu \mathrm{g}/\mathrm{L}$	1
Bromomethane (methyl bromide)		< 0.740	$\mu \mathrm{g/L}$	5
Chloroethane		< 0.195	μ g/L	1

continued ...

method blank continued . . .

, , , , , , , , , , , , , , , , , , ,		MDL		
Parameter	Flag	Result	Units	RL
Trichlorofluoromethane		< 0.160	μg/L	1
Acetone		< 0.854	μg/L	10
Iodomethane (methyl iodide)		< 0.112	μg/L	5
Carbon Disulfide		< 0.0764	μ g/L	1
Acrylonitrile		< 0.184	μg/L	1
2-Butanone (MEK)		< 0.394	μ g/L	5
4-Methyl-2-pentanone (MIBK)		< 0.484	μg/L	5
2-Hexanone		< 0.0975	μg/L	5
trans 1,4-Dichloro-2-butene		< 0.420	$\mu \mathrm{g/L}$	10
1,1-Dichloroethene		< 0.0736	$\mu \mathrm{g}/\mathrm{L}$	1
Methylene chloride		1.19	μg/L	5
MTBE		< 0.0504	μg/L	1
trans-1,2-Dichloroethene		< 0.0598	μg/L	1
1,1-Dichloroethane		< 0.0299	$\mu \mathrm{g/L}$	1
cis-1,2-Dichloroethene		< 0.101	μg/L	1
2,2-Dichloropropane		< 0.0665	μ g/L	1
1,2-Dichloroethane (EDC)		< 0.0557	μ g/L	1
Chloroform		< 0.0475	μg/L	1
1,1,1-Trichloroethane		< 0.0846	μg/L	1
1,1-Dichloropropene		< 0.0423	μg/L	1
Benzene		< 0.0495	μg/L	1
Carbon Tetrachloride		< 0.121	μg/L	1
1,2-Dichloropropane		< 0.0933	μg/L	1
Trichloroethene (TCE)		< 0.0495	μg/L	1
Dibromomethane (methylene bromide)		< 0.0640	μg/L	1
Bromodichloromethane		< 0.0651	μg/L	1
2-Chloroethyl vinyl ether		< 0.0905	μg/L	5
cis-1,3-Dichloropropene		< 0.0640	μg/L	1
trans-1,3-Dichloropropene		< 0.0504	μg/L	1
Toluene		0.390	μg/L	1
1,1,2-Trichloroethane		< 0.106	μg/L	1
1,3-Dichloropropane		< 0.0625	μg/L	1
Dibromochloromethane		< 0.0791	μg/L	1
1,2-Dibromoethane (EDB)		< 0.0460	μg/L	1
Tetrachloroethene (PCE)		< 0.0696	μg/L	1
Chlorobenzene		< 0.0217	μg/L	1
1,1,1,2-Tetrachloroethane		< 0.125	μg/L	1
Ethylbenzene		< 0.0566	μg/L	1
m,p-Xylene		< 0.0363	μg/L	1
Bromoform		< 0.0859	μg/L	1
Styrene		< 0.0394	μ g/L	1
o-Xylene		< 0.0505	μg/L	1
1,1,2,2-Tetrachloroethane		< 0.0672	μg/L	1
2-Chlorotoluene		< 0.0283	μg/L	1
1,2,3-Trichloropropane		< 0.0679	μg/L	1
Isopropylbenzene		< 0.0406	μg/L	1
Bromobenzene		< 0.103	μg/L	1
n-Propylbenzene		< 0.0423	μg/L	1
1,3,5-Trimethylbenzene		< 0.0557	μg/L	ĺ
tert-Butylbenzene		< 0.0770	μg/L	1
-			<i>Γ</i> · φ· ¬	

continued . . .

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method blank continued ...

		MDL		
Parameter	Flag	Result	Units	RL
1,2,4-Trimethylbenzene		< 0.0336	μg/L	l
1,4-Dichlorobenzene (para)		< 0.0672	μg/L	1
sec-Butylbenzene		< 0.0439	$\mu g/L$	1
1,3-Dichlorobenzene (meta)		< 0.0672	μ g/L	1
p-Isopropyltoluene		< 0.0513	$\mu { m g/L}$	1
4-Chlorotoluene		< 0.0460	μg/L	1
1,2-Dichlorobenzene (ortho)		< 0.0629	$\mu \mathrm{g}/\mathrm{L}$	1
n-Butylbenzene		< 0.0400	μ g/L	1
1,2-Dibromo-3-chloropropane		< 0.538	$\mu { m g/L}$	5
1,2,3-Trichlorobenzene		< 0.504	μg/L	5
1,2,4-Trichlorobenzene		< 0.166	$\mu \mathrm{g/L}$	5
Naphthalene		< 0.417	$\mu \mathrm{g/L}$	5
Hexachlorobutadiene		< 0.176	$\mu \mathrm{g}/\mathrm{L}$	5
Isopropyl Alcohol		< 5.00	μ g/L	5
Tert-butyl Alcohol		< 5.00	$\mu \mathrm{g/L}$	5
1,4-Dioxane		< 5.00	μg/L	5

		•			Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Dibromofluoromethane		51.8	μg/L	1	50.0	104	82.4 - 115
Toluene-d8		52.1	μ g/L	1	50.0	104	89.7 - 108
4-Bromofluorobenzene (4-BFB)		45.6	$\mu { m g}/{ m L}$	1	50.0	91	84.6 - 114

Method Blank (1) QC Batch: 32909

QC Batch: 32909 Prep Batch: 28617 Date Analyzed: 2006-12-13 QC Preparation: 2006-12-13 Analyzed By: DR Prepared By: DR

Method Blank (1) QC Batch: 32918

QC Batch: 32918 Prep Batch: 28627

Date Analyzed: 2006-12-15 QC Preparation: 2006-12-15 Analyzed By: JG Prepared By: JG

		MDL		
Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		< 1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		< 4.00	mg/L as CaCo3	4
Total Alkalinity		<2.38	mg/L as CaCo3	4

Parameter

Dissolved Chromium

Work Order: 6121321

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Units

mg/L

RL

0.005

HELSTF Groundwater Samples

Method Blank (1) QC Batch: 32994 QC Batch: 32994 Date Analyzed: 2006-12-20 Analyzed By: RR Prep Batch: 28613 QC Preparation: 2006-12-18 Prepared By: TS MDL Parameter Flag Result Units RL Dissolved Silver < 0.000199 0.002 mg/L Method Blank (1) QC Batch: 32994 QC Batch: 32994 Date Analyzed: 2006-12-20 Analyzed By: RR Prep Batch: QC Preparation: Prepared By: 28613 2006-12-18 TS MDL Parameter Flag Result Units RLDissolved Arsenic < 0.00360 mg/L 0.005 Method Blank (1) QC Batch: 32994 QC Batch: 32994 Date Analyzed: 2006-12-20 Analyzed By: RR Prep Batch: 28613 QC Preparation: 2006-12-18 Prepared By: TS **MDL** Parameter Result Flag Units RLDissolved Barium < 0.000450 0.01 mg/L Method Blank (1) QC Batch: 32994 QC Batch: 32994 Date Analyzed: Analyzed By: 2006-12-20 RR Prep Batch: 28613 QC Preparation: 2006-12-18 Prepared By: TS MDL Parameter Flag Result Units RL Dissolved Cadmium < 0.000577 mg/L 0.001 Method Blank (1) QC Batch: 32994 QC Batch: 32994 Date Analyzed: 2006-12-20 Analyzed By: RR Prep Batch: 28613 QC Preparation: 2006-12-18 Prepared By: TS MDL

Result

< 0.00357

Flag

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Report Date: January 5, 2007 Method Blank (1) QC Batch: 32994 OC Batch: 32994 Prep Batch: 28613 Parameter Dissolved Copper Method Blank (1) QC Batch: 32994 QC Batch: 32994 Prep Batch: 28613 Parameter Dissolved Lead Method Blank (1) QC Batch: 32994 Prep Batch: 28613 Parameter Dissolved Selenium

Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By: TS

MDL Result Units RL < 0.00127 mg/L 0.0125

Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By: TS

MDL Result Units RL < 0.00398 mg/L 0.005

QC Batch: 32994

Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By: TS

MDL Flag Result Units RL< 0.00556 mg/L 0.01

Method Blank (1) QC Batch: 32994

QC Batch: 32994 Date Analyzed: Prep Batch: 28613 QC Preparation:

Flag

Flag

2006-12-20 Analyzed By: RR2006-12-18 Prepared By: TS

MDL Parameter Flag Result Units RLDissolved Zinc < 0.00300 mg/L 0.005

Method Blank (1) QC Batch: 33006

QC Batch: 33006 Date Analyzed: Prep Batch: 28666 QC Preparation:

2006-12-15 Analyzed By: WB 2006-12-15 Prepared By: WB

MDL Parameter Flag Result Units RL Nitrate-N < 0.0106 mg/L 0.2

trans 1,4-Dichloro-2-butene

Work Order: 6121321 **HELSTF** Groundwater Samples Page Number: 17 of 56

Method Blank (1)	QC Batch: 33006					
QC Batch: 33006		Date Analyzed:	2006-12-15		Analyzed By:	WB
Prep Batch: 28666		QC Preparation:	2006-12-15		Prepared By:	WB
			MDL			
Parameter	Flag		Result	Units		RL
Chloride Sulfate			.0181 .0485	mg/L		0.5
Surface		<0	.0463	mg/L	······································	0.5
Method Blank (1)	QC Batch: 33035					
QC Batch: 33035		Date Analyzed:	2006-12-21		Analyzed By:	RR
Prep Batch: 28613		QC Preparation:	2006-12-18		Prepared By:	TS
			MDI			
Parameter	Flag		MDL Result	Units		RL
Dissolved Sodium			< 0.0309	mg/L		0.5
8.4° - 45° 3° D.1° 1° - 74° -	OC 12 4 1 22002					
Method Blank (1)	QC Batch: 33073					
QC Batch: 33073		Date Analyzed:	2006-12-22		Analyzed By:	JG
Prep Batch: 28749		QC Preparation:	2006-12-14		Prepared By:	JG
			MDL			
Parameter	Flag		Result	Units		RL
Total Dissolved Solids	3		<5.00	mg/L		5
Method Blank (1)	QC Batch: 33096					
QC Batch: 33096		Date Analyzed:	2006-12-20		Analyzed By:	JG
Prep Batch: 28772		QC Preparation:	2006-12-20		Prepared By:	JG
			MDL			
Parameter		Flag	Result	Units		RL
Bromochloromethane			< 0.0699	μg/L		1
Dichlorodifluorometh			< 0.0598	μ g/L		1
Chloromethane (meth	yl chloride)		< 0.230	μg/L		1
Vinyl Chloride	11 .1		< 0.0902	μg/L		1
Bromomethane (meth	yl bromide)		< 0.740	μg/L		5
Chloroethane			< 0.195	μg/L		l
Trichlorofluorometha	ne		< 0.160	μg/L		1
Acetone	1		< 0.854	μg/L		10
Iodomethane (methyl	iodide)		< 0.112	μg/L		5
Carbon Disulfide			< 0.0764	μg/L		1
Acrylonitrile 2-Butanone (MEK)			< 0.184	μ g/L		l
4-Methyl-2-pentanone	(MIRK)		< 0.394	μ g/L		5
2-Hexanone	(MIDIX)		<0.484 <0.0975	μg/L		5
4-110Aanone			< 0.0973	μ g/L		5

< 0.420

continued . . .

 μ g/L

10

method blank continued ...

method oftank commuted		MDL		
Parameter	Flag	Result	Units	RL
1,1-Dichloroethene		< 0.0736	μ g/L	1
Methylene chloride		1.55	μg/L	5
MTBE		< 0.0504	μg/L	1
trans-1,2-Dichloroethene		< 0.0598	μg/L	1
1,1-Dichloroethane		< 0.0299	μg/L	1
cis-1,2-Dichloroethene		< 0.101	μg/L	1
2,2-Dichloropropane		< 0.0665	μg/L	1
1,2-Dichloroethane (EDC)		< 0.0557	μg/L	1
Chloroform		< 0.0475	μg/L	1
1,1,1-Trichloroethane		< 0.0846	μg/L	1
1,1-Dichloropropene		< 0.0423	μg/L	1
Benzene		< 0.0495	μg/L	1
Carbon Tetrachloride		< 0.121	μg/L	1
1,2-Dichloropropane		< 0.0933	$\mu \mathrm{g/L}$	1
Trichloroethene (TCE)		< 0.0495	μg/L	1
Dibromomethane (methylene bromide)		< 0.0640	μg/L	ī
Bromodichloromethane		< 0.0651	μ g/L	1
2-Chloroethyl vinyl ether		< 0.0905	µg/L	5
cis-1,3-Dichloropropene		< 0.0640	μg/L	ĺ
trans-1,3-Dichloropropene		< 0.0504	μg/L	1
Toluene		0,610	μg/L	1
1,1,2-Trichloroethane		< 0.106	μg/L	1
1,3-Dichloropropane		< 0.0625	μg/L	1
Dibromochloromethane		< 0.0791	μg/L	1
1,2-Dibromoethane (EDB)		< 0.0460	μg/L	1
Tetrachloroethene (PCE)		< 0.0696	μg/L	1
Chlorobenzene		< 0.0217	μg/L	1
1,1,1,2-Tetrachloroethane		< 0.125	μg/L	1
Ethylbenzene		< 0.0566	μg/L	1
m,p-Xylene		< 0.0363	μg/L	1
Bromoform		< 0.0859	μg/L	1
Styrene		< 0.0394	μg/L	1
o-Xylene		< 0.0505	μg/L	1
1,1,2,2-Tetrachloroethane		< 0.0672	μg/L	1
2-Chlorotoluene		< 0.0283	μg/L	1
1,2,3-Trichloropropane		< 0.0679	μg/L	1
Isopropylbenzene		< 0.0406	μg/L	1
Bromobenzene		< 0.103	μg/L μg/L	1
n-Propylbenzene		< 0.0423	μg/L	1
1,3,5-Trimethylbenzene		< 0.0557	μg/L	, 1
tert-Butylbenzene		< 0.0770	μg/L	1
1,2,4-Trimethylbenzene		< 0.0336		1
1,4-Dichlorobenzene (para)		<0.0672	μg/L	1
sec-Butylbenzene		<0.0439	μg/L	1
1,3-Dichlorobenzene (meta)		< 0.0672	μg/L	1
p-Isopropyltoluene			μg/L	1
4-Chlorotoluene		< 0.0513	μg/L	1
1,2-Dichlorobenzene (ortho)		<0.0460	μg/L	1
n-Butylbenzene		< 0.0629	μg/L]
1,2-Dibromo-3-chloropropane		< 0.0400	μ g/L	1 -
1,2 27000mo-5-emoropropane		< 0.538	μ g/L	5

continued ...

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mathad	Mousk	continue	1
memoa	тистк	commuec	1

		MDL		
Parameter	Flag	Result	Units	RL
1,2,3-Trichlorobenzene		< 0.504	μ g/L	5
1,2,4-Trichlorobenzene		< 0.166	$\mu \mathrm{g}/\mathrm{L}$	5
Naphthalene		< 0.417	$\mu \mathrm{g/L}$	5
Hexachlorobutadiene		< 0.176	$\mu \mathrm{g}/\mathrm{L}$	5
Isopropyl Alcohol		< 5.00	μg/L	5
Tert-butyl Alcohol		< 5.00	$\mu \mathrm{g}/\mathrm{L}$	5
1,4-Dioxane		< 5.00	μ g/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane	7,55	49.5	μg/L	1	50.0	99	82.4 - 115
Toluene-d8		49.1	μ g/L	1	50.0	98	89.7 - 108
4-Bromofluorobenzene (4-BFB)		47.2	$\mu \mathrm{g}/\mathrm{L}$	1	50.0	94	84.6 - 114

Method Blank (1)

QC Batch: 33098

QC Batch: 33098

Date Analyzed: 2006-12-26 Analyzed By: RR Prepared By: TS

Prep Batch:

28574

QC Preparation: 2006-12-15

MDL Parameter Flag Result Units RL Total Silver < 0.000274 mg/L 0.002

Method Blank (1)

QC Batch: 33098

QC Batch: Prep Batch: 28574

33098

Date Analyzed: 2006-12-26

Analyzed By: RR Prepared By: TS

QC Preparation: 2006-12-15

MDL

Result

< 0.00489

RL

0.01

RR

TS

Units

mg/L

Method Blank (1)

QC Batch: 33098

QC Batch: Prep Batch:

33098

Date Analyzed:

2006-12-26

Analyzed By: RR TS

Parameter

Total Arsenic

28574

QC Preparation:

2006-12-15

Prepared By:

Parameter Total Barium Flag

Flag

MDL

Result

< 0.000450

Units RLmg/L 0.01

Method Blank (1)

QC Batch: 33098

QC Batch: 33098 Prep Batch: 28574 Date Analyzed:

2006-12-26

Analyzed By: Prepared By:

QC Preparation: 2006-12-15

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		ሳ	MDL			
Parameter	Flag		esult	Units		RL
Total Cadmium		< 0.00		mg/L		0.00
Method Blank (1)	QC Batch: 33098					
QC Batch: 33098		Date Analyzed: 20	006-12-26		Analyzed By:	RR
Prep Batch: 28574		QC Preparation: 20	006-12-15		Prepared By:	TS
		N	MDL			
Parameter	Flag		esult	Units		RL
Total Chromium		< 0.00	0357	mg/L		0.005
Mathad Blank (1)	OC Databa 22000					
Method Blank (1)	QC Batch: 33098					
QC Batch: 33098		,	006-12-26		Analyzed By:	RR
Prep Batch: 28574		QC Preparation: 20	006-12-15		Prepared By:	TS
n.	771		DL			
Parameter Total Copper	Flag	Res		Units mg/L		RL 0.00
Method Blank (1)	QC Batch: 33098					
QC Batch: 33098	,	Date Analyzed: 20	006-12-26		A sea learned Day	DD
Prep Batch: 28574		•	006-12-26		Analyzed By: Prepared By:	RR TS
•		•			11 - p 25,	, ~
Parameter	ru		MDL	* * *.		7 5. 7
Total Phosphorous	Flag		Result .0229	Units mg/L		RL 0.0:
Total Friesphoroda			.022)	Hig/L		0.0.
Method Blank (1)	QC Batch: 33098					
QC Batch: 33098			006-12-26		Analyzed By:	RR
Prep Batch: 28574		QC Preparation: 20	006-12-15		Prepared By:	TS
Parameter	¥*1	MD		***		
Raramerer	Flag	Rest <0.0031		Units		RL
		<0.003	i U	mg/L		0.00
Total Lead	QC Batch: 33098					
Total Lead Method Blank (1) QC Batch: 33098 Prep Batch: 28574	QC Batch: 33098	•	006-12-26 006-12-15		Analyzed By: Prepared By:	RI TS

Prep Batch: 28842

Work Order: 6121321

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Prepared By:

WB

HELSTF Groundwater Samples

MDL Flag Parameter Result Units RL Total Sclenium < 0.00556 mg/L 0.01 Method Blank (1) QC Batch: 33098 QC Batch: 33098 Date Analyzed: 2006-12-26 Analyzed By: RR Prep Batch: 28574 QC Preparation: 2006-12-15 Prepared By: TS **MDL** Parameter Flag Result Units RL Total Zinc < 0.000666 mg/L 0.005 Method Blank (1) QC Batch: 33125 QC Batch: 33125 Date Analyzed: 2006-12-27 Analyzed By: RR Prep Batch: 28574 QC Preparation: 2006-12-15 Prepared By: TS MDL Parameter Flag Result Units RLTotal Sodium < 0.0309 mg/L 0.5 Method Blank (1) QC Batch: 33128 OC Batch: 33128 Date Analyzed: 2006-12-26 Analyzed By: JS Prep Batch: 28801 QC Preparation: 2006-12-26 Prepared By: JS **MDL** Parameter Flag Result Units RLNitrate and Nitrite as N < 0.0223 mg/L 0.1 Method Blank (1) QC Batch: 33182 QC Batch: 33182 Date Analyzed: 2006-12-27 Analyzed By: WB Prep Batch: 28842 QC Preparation: 2006-12-27 Prepared By: WB **MDL** Parameter Flag Result Units RLBromide < 0.0429 mg/L 0.2 Method Blank (1) QC Batch: 33182 OC Batch: 33182 Date Analyzed: 2006-12-27 Analyzed By: WB

QC Preparation:

2006-12-27

Work Order: 6121321 HELSTF Groundwater Samples

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MDL Parameter Flag Result Units RL Nitrite-N < 0.0128 mg/L 0.2 Method Blank (1) QC Batch: 33182 OC Batch: 33182 Date Analyzed: 2006-12-27 Analyzed By: WB Prep Batch: 28842 QC Preparation: 2006-12-27 Prepared By: WB MDL Parameter Flag Result Units RLFluoride < 0.0119 mg/L 0.2 Duplicates (1) QC Batch: 32903 Date Analyzed: 2006-12-12 Analyzed By: JG Prep Batch: 28611 QC Preparation: 2006-12-12 Prepared By: JG Duplicate Sample RPD Param Result Result Units Dilution RPD Limit 7.47 7.48 pН s.u. 0 20 Duplicates (1) QC Batch: 32909 Date Analyzed: 2006-12-13 Analyzed By: DR Prep Batch: 28617 QC Preparation: 2006-12-13 Prepared By: DR Duplicate Sample **RPD** Units Param Result Result Dilution RPD Limit Specific Conductance 15800 15800 μMHOS/cm 0 6.7 Duplicates (1) QC Batch: 33073 Date Analyzed: 2006-12-22 Analyzed By: JG Prep Batch: 28749 QC Preparation: 2006-12-14 Prepared By: JG Duplicate Sample RPD Result Param Result Units Dilution RPD Limit Total Dissolved Solids 14400 14500 mg/L 20 1 Laboratory Control Spike (LCS-1) QC Batch: 32786 Date Analyzed: 2006-12-13 Analyzed By: SM Prep Batch: 28518 QC Preparation: 2006-12-13 Prepared By: SM

	LCS			Spike	Matriv		Dag
Param	Result	Units	Dil.	Amount	Matrix Result	Rec.	Rec. Limit
Ammonia-N	5.04	mg/L	1	5.00	< 0.820	101	66 - 122

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Ammonia-N	4.76	mg/L	1	5.00	< 0.820	95	66 - 122	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 32862 Date Analyzed: 2006-12-15

Analyzed By: TS

Prep Batch: 28579

QC Preparation: 2006-12-15

Prepared By: TS

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	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Mercury	0.000950	mg/L	-	0.00100	< 0.0000217	95	89.4 - 108

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Mercury	0.000960	mg/L	1	0.00100	< 0.0000217	96	89.4 - 108	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 32895 Date Analyzed:

2006-12-16

Analyzed By: JG Prepared By: JG

Prep Batch: 28606

QC Preparation: 2006-12-16

LCS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit 1,1-Dichloroethene 50.0 μg/L 50.0 < 0.0736 100 83.4 - 114 1 Benzene 52,4 μg/L 1 50.0 < 0.0495 105 83.5 - 115 51.4 Trichloroethene (TCE) μ g/L 1 50.0 103 < 0.0495 91.3 - 111 Toluene 48.3 μ g/L 1 50.0 < 0.0736 97 82 - 110 Chlorobenzene 50.5 $\mu g/L$ 1 50.0 < 0.0217 101 87.9 - 109

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
1,1-Dichloroethene	49.6	μg/L	1	50.0	< 0.0736	99	83.4 - 114	l	20
Benzene	52.8	μg/L	1	50.0	< 0.0495	106	83.5 - 115	. 1	20
Trichloroethene (TCE)	52.9	μ g/L	1	50.0	< 0.0495	106	91.3 - 111	3	20
Toluene	48.6	μ g/L	1	50.0	< 0.0736	97	82 - 110	1	20
Chlorobenzene	51.5	μ g/L	1	50.0	< 0.0217	103	87.9 - 109	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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control spikes continued	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Dibromofluoromethane	51.6	50.7	μg/L	1	50.0	103	101	82.4 - 115
Toluene-d8	50.6	50.7	μ g/L	1	50.0	101	101	89.7 - 108
4-Bromofluorobenzene (4-BFB)	48.9	48.7	$\mu \mathrm{g/L}$	1	50.0	98	97	84.6 - 114

Laboratory Control Spike (LCS-1)

QC Batch: 32994 Prep Batch: 28613 Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By: TS

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	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Silver	0.127	mg/L	1	0.125	< 0.000199	102	86.2 - 116

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Silver	0.124	mg/L	1	0.125	< 0.000199	99	86.2 - 116	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 32994 Prep Batch: 28613 Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By: TS

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Arsenic	0.464	mg/L	I	0.500	< 0.00360	93	78.7 - 116

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Arsenic	0.467	mg/L	1	0.500	< 0.00360	93	78.7 - 116	l	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 32994 Prep Batch: 28613 Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By: TS

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Barium	0.957	mg/L	1	1.00	< 0.000450	96	85 - 114

LCSD Spike Matrix Rec. RPD Param Result Units Dil. Amount Result Rec. Limit RPD Limit Dissolved Barium 0.942 1.00 < 0.000450 94 85 - 114 20 mg/L 2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

OC Batch: 32994 Prep Batch: 28613 Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18 Analyzed By: RRPrepared By: TS

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LCS Spike Matrix Rec. Param Result Result Units Dil. Amount Rec. Limit Dissolved Cadmium 0.240 < 0.000577 mg/L 0.250 96 83.3 - 113

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Cadmium	0.236	mg/L	1	0.250	< 0.000577	94	83.3 - 113	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

OC Batch: 32994 Prep Batch: 28613

2006-12-20 Date Analyzed: QC Preparation: 2006-12-18

Analyzed By: RRPrepared By: TS

LCS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Dissolved Chromium < 0.00357 98 0.0980 mg/L 0.100 83 - 112

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Chromium	0.0980	mg/L	1	0.100	< 0.00357	98	83 - 112	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

OC Batch: 32994 Prep Batch: 28613 Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18 Analyzed By: RR Prepared By: TS

LCS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit < 0.00127 84.3 - 114 Dissolved Copper 0.126 mg/L 0.125 101

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Copper	0.123	mg/L	l	0.125	< 0.00127	98	84.3 - 114	2	20

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HELSTF Groundwater Samples

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:

32994 28613 Date Analyzed:

2006-12-20

QC Preparation: 2006-12-18 Analyzed By: RR

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Prepared By:

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	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Lead	0.503	mg/L	1	0.500	< 0.00398	101	81.1 - 111

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Lead	0.479	mg/L	1	0.500	< 0.00398	96	81.1 - 111	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch:

Date Analyzed:

2006-12-20

Analyzed By: RR

Prep Batch: 28613

QC Preparation:

2006-12-18

Prepared By:

TS

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Selenium	0.422	mg/L	1	0.500	< 0.00556	84	69.6 - 111

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Selenium	0.423	mg/L	1	0.500	< 0.00556	85	69.6 - 111	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch:

32994

Date Analyzed:

2006-12-20

Analyzed By: RR

Prep Batch: 28613

QC Preparation: 2006-12-18

Prepared By: TS

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Zinc	0.225	mg/L	1	0.250	< 0.00300	90	84.7 - 113

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Zinc	0.223	mg/L	l	0.250	< 0.00300	89	84.7 - 113	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

OC Batch: 33006

Date Analyzed:

2006-12-15

Analyzed By: Prepared By:

WB WB

Prep Batch: 28666

QC Preparation:

2006-12-15

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	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Nitrate-N	2.67	mg/L	1	2.50	< 0.0106	107	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Nitrate-N	2.72	mg/L	1	2.50	< 0.0106	109	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33006 Prep Batch: 28666

Date Analyzed: 2006-12-15 QC Preparation: 2006-12-15

Analyzed By: WB Prepared By: WB

n	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	12.3	mg/L	1	12.5	< 0.0181	98	90 - 110
Sulfate	13.1	mg/L	1	12.5	< 0.0485	105	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	13.1	mg/L	1	12.5	< 0.0181	105	90 - 110	6	20
Sulfate	13.4	mg/L	1	12.5	< 0.0485	107	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

OC Batch: Prep Batch: 28613

33035

Date Analyzed:

2006-12-21 QC Preparation: 2006-12-18 Analyzed By: RR

Prepared By:

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Sodium	47.0	mg/L	l	50.0	< 0.0309	94	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Sodium	48.4	mg/L]	50.0	< 0.0309	97	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33096 Prep Batch: 28772

Date Analyzed: 2006-12-20 QC Preparation: 2006-12-20

Analyzed By: JG Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1-Dichloroethene	49.6	μg/L	1	50.0	< 0.0736	99	83,4 - 114
Benzene	51.2	μg/L	1	50.0	< 0.0495	102	83.5 - 115
Trichloroethene (TCE)	51.0	µg/L	1	50.0	< 0.0495	102	91.3 - 111
Toluene	46.7	$\mu \mathrm{g/L}$	1	50.0	< 0.0736	93	82 - 110
Chlorobenzene	49.2	μ g/L	1	50.0	< 0.0217	98	87.9 - 109

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
1,1-Dichloroethene	50.3	μ g/L	1	50.0	< 0.0736	101	83.4 - 114	I	20
Benzene	51.2	μ g/L	1	50.0	< 0.0495	102	83.5 - 115	0	20
Trichloroethene (TCE)	51.4	μ g/L	1	50.0	< 0.0495	103	91.3 - 111	i	20
Toluene	47.0	μ g/L	1	50.0	< 0.0736	94	82 - 110	l	20
Chlorobenzene	49.5	μ g/L	1	50.0	< 0.0217	99	87.9 - 109	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	48.3	48.5	μg/L	1	50.0	97	97	82.4 - 115
Toluene-d8	47.4	47.8	μg/L	i	50.0	95	96	89.7 - 108
4-Bromofluorobenzene (4-BFB)	47.6	47.5	μ g/L	ì	50.0	95	95	84.6 - 114

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 28574

33098

Date Analyzed:

2006-12-26

Analyzed By: RR

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Prepared By: TS

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Silver	0.120	mø/L	1	0.125	< 0.000274	96	87.9 - 111

QC Preparation: 2006-12-15

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Silver	0.119	mg/L	1	0.125	< 0.000274	95	87.9 - 111	i	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 28574

33098

Date Analyzed:

2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Arsenic	0.463	mg/L	1	0.500	< 0.00489	93	86.8 - 108

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HELSTF Groundwater Samples

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Arsenic	0.459	mg/L	i	0.500	< 0.00489	92	86.8 - 108	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33098 Prep Batch: 28574

Date Analyzed:

2006-12-26

QC Preparation: 2006-12-15 Analyzed By: RR

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Prepared By: TS

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Barium	0.994	mg/L	i	1.00	< 0.000450	99	88.8 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Barium	0.992	mg/L	1	1.00	< 0.000450	99	88.8 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33098 Date Analyzed: 2006-12-26 Analyzed By: RR

Prep Batch: 28574

QC Preparation: 2006-12-15

Prepared By:

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Cadmium	0.238	mg/L	1	0.250	< 0.000268	95	86.8 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Cadmium	0.238	mg/L	1	0.250	< 0.000268	95	86.8 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33098 Date Analyzed: 2006-12-26 Analyzed By: RR

Prep Batch: 28574

QC Preparation: 2006-12-15

Prepared By: TS

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Chromium	0.103	mg/L	1	0.100	< 0.00357	103	86.5 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Chromium	0.102	mg/L	I	0.100	< 0.00357	102	86.5 - 115	1	20

Work Order: 6121321 **HELSTF** Groundwater Samples

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Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:

33098 28574

Date Analyzed: QC Preparation: 2006-12-26 2006-12-15

Analyzed By: RR

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Prepared By: TS

LCS

Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Total Copper 0.126 mg/L 0.125 < 0.00127 101 83.4 - 117

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Copper	0.125	mg/L	1	0.125	< 0.00127	100	83.4 - 117	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch:

33098

Date Analyzed:

2006-12-26

Analyzed By:

RR Prepared By: TS

Prep Batch: 28574

QC Preparation:

2006-12-15

	LCS	1		Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Phosphorous	0.498	mg/L	1	0.500	< 0.0229	100	87.3 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Phosphorous	0.464	mg/L	1	0.500	< 0.0229	93	87.3 - 114	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch:

33098

Date Analyzed:

2006-12-26

Analyzed By: RR Prepared By: TS

Prep Batch: 28574

QC Preparation: 2006-12-15

LCS Matrix Spike Rec. Param Result Units Dil. Amount Result Rec. Limit Total Lead 0.499 0.500 < 0.00310 100 mg/L 83 - 109

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Lead	0.514	mg/L	1	0.500	< 0.00310	103	83 - 109	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

OC Batch: 33098 Date Analyzed:

2006-12-26 2006-12-15

Analyzed By:

RR Prepared By: TS

Prep Batch: 28574

QC Preparation:

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	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Selenium	0.421	mg/L	1	0.500	< 0.00556	84	75 - 112

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Selenium	0.430	mg/L	1	0.500	< 0.00556	86	75 - 112	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33098 Prep Batch: 28574 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

LCS Spike Matrix Rec. Param Result Units Dil. Amount Result Limit Rec. Total Zinc 0.231 < 0.000666 mg/L 0.250 92 82.9 - 109

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Zinc	0.227	mg/L	I	0.250	< 0.000666	91	82.9 - 109	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33125 Prep Batch: 28574 Date Analyzed: 2006-12-27 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

LCS Spike Matrix Rec. Param Result Units Dil. Amount Result Limit Rec. Total Sodium 56.6 50.0 mg/L < 0.0309 113 87.1 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Sodium	57.1	mg/L	j	50.0	< 0.0309	114	87.1 - 120]	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33128 Prep Batch: 28801 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-26

Analyzed By: JS Prepared By: JS

LCS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Nitrate and Nitrite as N 0.152 mg/L 0.160< 0.0223 95 82.2 - 115

Work Order: 6121321

HELSTF Groundwater Samples

	1.000			0. 11					222
	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Nitrate and Nitrite as N	0.160	mg/L	1	0.160	< 0.0223	100	82.2 - 115	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 33182 Prep Batch: 28842 Date Analyzed: QC Preparation:

2006-12-27 2006-12-27

Analyzed By: WB

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Prepared By: WB

LCS Result

Rec.

Matrix Spike Param Units Dil. Amount Result Limit Rec. Bromide 2.56 2.50 < 0.0429 mg/L 102 90 - 110 1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Bromide	2.56	mg/L	1	2.50	< 0.0429	102	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch:

33182

Date Analyzed:

2006-12-27

Analyzed By: Prepared By:

WB WB

Prep Batch: 28842

QC Preparation: 2006-12-27

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Nitrite-N	2.46	mg/L	1	2.50	< 0.0128	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Nitrite-N	2.54	mg/L	1	2.50	< 0.0128	102	90 - 110	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 28842

33182

Date Analyzed:

2006-12-27

Analyzed By: WB Prepared By: WB

QC Preparation: 2006-12-27

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Fluoride	2.45	mg/L	1	2.50	< 0.0119	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Fluoride	2.52	mg/L	1	2.50	< 0.0119	101	90 - 110	3	20

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Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch:

32786

Date Analyzed:

2006-12-13

2006-12-13

Analyzed By: SM

Prepared By:

SM

Prep Batch: 28518

QC Preparation:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Ammonia-N	4.37	mg/L	1	5.00	< 0.820	87	58 - 134

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Ammonia-N	4.14	mg/L	1	5.00	< 0.820	83	58 - 134	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111036

OC Batch:

32862

Date Analyzed:

2006-12-15

Analyzed By: TS

Prep Batch: 28579

QC Preparation: 2006-12-15

Prepared By: TS

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Mercury	0.000960	mg/L	1	0.00100	5e-05	91	49.1 - 137

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Mercury	0.000660	mg/L	1	0.00100	5e-05	61	49.1 - 137	37	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 111685

QC Batch: 32895

Date Analyzed:

2006-12-16

Analyzed By: JG

Prep Batch: 28606

QC Preparation: 2006-12-16

Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
1,1-Dichloroethene	50.3	μg/L	1	50.0	< 0.0736	101	78.7 - 119
Benzene	51.5	μ g/L	1	50.0	< 0.0495	103	75.8 - 125
Trichloroethene (TCE)	49.8	$\mu { m g/L}$	1	50.0	< 0.0495	100	83.6 - 112
Toluene	46.2	μ g/L	1	50.0	< 0.0736	92	81.6 - 115
Chlorobenzene	48.4	$\mu { m g/L}$	1	50.0	< 0.0217	97	83.9 - 113

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
1,1-Dichloroethene	50.9	μg/L	1	50.0	< 0.0736	102	78.7 - 119	1	20
Benzene	52.6	μg/L	1	50.0	< 0.0495	105	75.8 - 125	2	20
Trichloroethene (TCE)	51.1	μg/L	1	50.0	< 0.0495	102	83.6 - 112	3	20

continued . . .

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matrix spikes continued . . .

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Toluene	47.0	μ g/L	ì	50.0	< 0.0736	94	81.6 - 115	2	20
Chlorobenzene	50.3	μ g/L	1	50.0	< 0.0217	101	83.9 - 113	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Dibromofluoromethane	52.5	50.2	μg/L	1	50	105	100	86.6 - 114
Toluene-d8	49.9	49.0	μ g/L	1	50	100	98	91 - 109
4-Bromofluorobenzene (4-BFB)	46.4	45.4	μ g/L	1	50	93	91	87.2 - 113

Matrix Spike (MS-1) Spiked Sample: 111614

OC Batch: 32994 Date Analyzed: 2006-12-20

Analyzed By: RRPrepared By: TS

Prep Batch: 28613

QC Preparation: 2006-12-18

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Silver	0.115	mg/L	1	0.125	< 0.000199	92	90.1 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Silver	0.116	mg/L	1	0.125	< 0.000199	93	90.1 - 120	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 32994 Prep Batch: 28613

Date Analyzed: QC Preparation:

2006-12-20 2006-12-18 Analyzed By: RR

Prepared By: TS

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Dissolved Arsenic 0.470 mg/L 0.500 < 0.00360 94 75 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Arsenic	0.439	mg/L	1	0.500	< 0.00360	88	75 - 114	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 32994 Prep Batch: 28613 Date Analyzed: 2006-12-20 Analyzed By: RR TS

QC Preparation:

2006-12-18

Prepared By:

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	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Barium	0.810	mg/L	l	1.00	0.01	80	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Barium	0.820	mg/L	1	1.00	0.01	81	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

OC Batch: 32994 Prep Batch: 28613

Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By: TS

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Dissolved Cadmium 0.195 mg/L < 0.000577 0.250 78 75 - 112

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Cadmium	0.192	mg/L	1	0.250	< 0.000577	77	75 - 112	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 32994 Prep Batch: 28613

Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Chromium	0.0820	mg/L	1	0.100	< 0.00357	82	75 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Chromium	0.0870	mg/L	1	0.100	< 0.00357	87	75 - 121	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Spiked Sample: 111614 Matrix Spike (MS-1)

QC Batch: 32994 Prep Batch: 28613 Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18

Analyzed By: RR Prepared By: TS

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Dissolved Copper 0.118 0.125 0.003 mg/L 92 81.5 - 125

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	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Copper	0.117	mg/L	1	0.125	0.003	91	81.5 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Spiked Sample: 111614 Matrix Spike (MS-1)

QC Batch: 32994 Prep Batch: 28613

Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18 Analyzed By: RR Prepared By: TS

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Lead	0.495	mg/L	1	0.500	< 0.00398	99	75 - 111

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Lead	0.486	mg/L	1	0.500	< 0.00398	97	75 - 111	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 32994 Date Analyzed: 2006-12-20 Analyzed By: RR Prepared By: TS

Prep Batch: 28613

QC Preparation: 2006-12-18

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Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Selenium	0.440	mg/L	1	0.500	< 0.00556	88	75 - 118

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Selenium	0.458	mg/L	l	0.500	< 0.00556	92	75 - 118	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

OC Batch: 32994 Prep Batch: 28613 Date Analyzed: 2006-12-20 QC Preparation: 2006-12-18 Analyzed By: RR Prepared By: TS

MS Spike Matrix Rec. Param Result Units Result Dil. Amount Rec. Limit Dissolved Zinc 0.236 mg/L 0.250 < 0.00300 94 80.4 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Zinc	0.227	mg/L	1	0.250	< 0.00300	91	80.4 - 120	4	20

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Matrix Spike (MS-1) Spiked Sample: 111623

QC Batch: Prep Batch:

33006 28666

Date Analyzed:

2006-12-15

QC Preparation: 2006-12-15

WB Analyzed By:

Prepared By: WB

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Nitrate-N	13700	mg/L	500	12500	110	109	85.7 - 123

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Nitrate-N	13900	mg/L	500	12500	110	110	85.7 - 123	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 111623

QC Batch:

33006

2006-12-15

Analyzed By:

WB

Prep Batch:

28666

Date Analyzed: QC Preparation:

2006-12-15

Prepared By:

WB

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	68600	mg/L	5000	62500	4650	102	10 - 6384
Sulfate	72400	mg/L	5000	62500	9630	100	86.2 - 117

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	69300	mg/L	5000	62500	4650	103	10 - 6384	l	20
Sulfate	74100	mg/L	5000	62500	9630	103	86.2 - 117	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch:

33035

Date Analyzed:

2006-12-21

Analyzed By:

RR

Prep Batch: 28613

QC Preparation: 2006-12-18 Prepared By: TS

MS Spike Matrix Rec. Param Result Dil. Units Amount Result Limit Rec. Dissolved Sodium 2040 mg/L 50.0 2000 80 75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Sodium	2040	mg/L	1	50.0	2000	80	75 - 125	0	20

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Matrix Spike (MS-1)

Spiked Sample: 111624

OC Batch:

33096

Date Analyzed:

2006-12-20

Analyzed By:

Prep Batch:

28772

QC Preparation: 2006-12-20 Prepared By:

JG

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
1,1-Dichloroethene	48.5	μg/L	1	50.0	< 0.0736	97	78.7 - 119
Benzene	49.7	$\mu { m g/L}$	1	50.0	< 0.0495	99	75.8 - 125
Trichloroethene (TCE)	49.8	μ g/L	1	50.0	< 0.0495	100	83.6 - 112
Toluene	45.8	μ g/L	1	50.0	< 0.0736	92	81.6 - 115
Chlorobenzene	47.7	μg/L	1	50.0	< 0.0217	95	83.9 - 113

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
1,1-Dichloroethene	I	n/a	μg/L	1	50.0	< 0.0736	0	78.7 - 119	200	20
Benzene	2	n/a	μ g/L	1	50.0	< 0.0495	0	75.8 - 125	200	20
Trichloroethene (TCE)	3	n/a	μ g/L	1	50.0	< 0.0495	0	83.6 - 112	200	20
Toluene	4	n/a	μ g/L	1	50.0	< 0.0736	0	81.6 - 115	200	20
Chlorobenzene	5	n/a	μg/L	1	50.0	< 0.0217	0	83.9 - 113	200	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MS	MSD			Spike	MS	MSD	Rec.
Surrogate		Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Dibromofluoromethane	6	48.7	n/a	μg/L	1	50	97	0	86.6 - 114
Toluene-d8	7	48.1	n/a	μ g/L	1	50	96	0	91 - 109
4-Bromofluorobenzene (4-BFB)	8	48.4	n/a	μ g/L	1	50	97	0	87.2 - 113

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch:

33098

Prep Batch: 28574

Date Analyzed:

2006-12-26

QC Preparation: 2006-12-15 Analyzed By: RR

Prepared By: TS

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Total Silver 0.119 mg/L 0.125 < 0.000274 95 88.2 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Silver	0.116	mg/L	1	0.125	< 0.000274	93	88.2 - 114	3	20

¹RPD is out of range because a matrix spike duplicate was not prepared.

²RPD is out of range because a matrix spike duplicate was not prepared.

³RPD is out of range because a matrix spike duplicate was not prepared.

⁴RPD is out of range because a matrix spike duplicate was not prepared.

⁵RPD is out of range because a matrix spike duplicate was not prepared.

⁶RPD is out of range because a matrix spike duplicate was not prepared.

⁷RPD is out of range because a matrix spike duplicate was not prepared.

⁸RPD is out of range because a matrix spike duplicate was not prepared.

Work Order: 6121321

HELSTF Groundwater Samples

Matrix Spike (MS-1)

Spiked Sample: 111614

OC Batch: 33098 Prep Batch: 28574

Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

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MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Total Arsenic 0.478 mg/L 0.500 < 0.00489 75.9 - 116 96

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Arsenic	0.498	mg/L	1	0.500	< 0.00489	100	75.9 - 116	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 111614

QC Batch: 33098 Prep Batch: 28574 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Total Barium 0.827 mg/L 1.00 0.01 82 64.9 - 129

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Barium	0.858	mg/L	1	1.00	0.01	85	64.9 - 129	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 33098 Prep Batch: 28574 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Total Cadmium 0.197 mg/L 0.250 < 0.000268 79 66.5 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

MSD Spike Matrix Rec. RPD Param Result Units Dil. Amount Result Rec. Limit RPD Limit Total Cadmium 0.211 mg/L 0.250 < 0.000268 66.5 - 121 20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

OC Batch: 33098 Prep Batch: 28574 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

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	МО			0. 11			5
	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Chromium	0.0860	mg/L	1	0.100	< 0.00357	86	69.2 - 129

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Chromium	0.0910	mg/L	1	0.100	< 0.00357	91	69.2 - 129	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 33098 Prep Batch: 28574 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Total Copper 0.118 < 0.00127 mg/L 0.125 94 83.8 - 118

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Copper	0.120	mg/L	j	0.125	< 0.00127	96	83.8 - 118	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 33098 Prep Batch: 28574 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Total Phosphorous 0.469 mg/L 0.500 0.028 88 70.1 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Phosphorous	0.484	mg/L	1	0.500	0.028	91	70.1 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result,

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 33098 Prep Batch: 28574 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15

Analyzed By: RR Prepared By: TS

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	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Lead	0.461	mg/L	1	0.500	< 0.00310	92	71.9 - 115

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	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Lead	0.489	mg/L	1	0.500	< 0.00310	98	71.9 - 115	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 33098 Prep Batch: 28574

Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15 Analyzed By: RR TS

Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Selenium	0.501	mg/L	l	0.500	< 0.00556	100	66.8 - 116

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Selenium	0.530	mg/L	1	0.500	< 0.00556	106	66.8 - 116	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 33098 Prep Batch: 28574 Date Analyzed: 2006-12-26 QC Preparation: 2006-12-15 Analyzed By: RR

Prepared By: TS

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Zinc	0.228	mg/L	1	0.250	< 0.000666	91	75.5 - 113

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Zinc	0.225	mg/L	1	0.250	< 0.000666	90	75.5 - 113	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch: 33125 Prep Batch: 28574

Date Analyzed: 2006-12-27 QC Preparation: 2006-12-15 Analyzed By: RR

Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Sodium	2150	mg/L	1	50.0	2100	100	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Sodium	2150	mg/L	ì	50.0	2100	100	75 - 125	0	20

Matrix Spike (MS-1) Spiked Sample: 111614

QC Batch:

33128 Prep Batch: 28801

Date Analyzed:

2006-12-26

QC Preparation: 2006-12-26 Analyzed By: JS

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Prepared By: JS

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Nitrate and Nitrite as N	9	48.9	mg/L	500	80.0	56.9	-10	25,4 - 158

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Nitrate and Nitrite as N	34,3	mg/L	500	500	56.9	0	25.4 - 158	11	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 112625

QC Batch: 33182 Date Analyzed:

2006-12-27

Analyzed By:

WB Prepared By: **WB**

Prep Batch: 28842

QC Preparation:

2006-12-27

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Bromide	130	mg/L	50	125	<2.14	104	95.4 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Bromide	129	mg/L	50	125	<2.14	103	95.4 - 114	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 112625

OC Batch:

33182

Date Analyzed:

2006-12-27

Analyzed By: Prepared By:

WB WB

Prep Batch: 28842

QC Preparation:

2006-12-27

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Nitrite-N	137	mg/L	50	125	< 0.640	110	58.3 - 151

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Nitrite-N	129	mg/L	50	125	< 0.640	103	58.3 - 151	6	20

⁹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁰Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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Matrix Spike (MS-1) Spiked Sample: 112625

QC Batch:

33182

Prep Batch: 28842

Date Analyzed:

2006-12-27

QC Preparation: 2006-12-27

Analyzed By: WB

WB

Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Fluoride	121	mg/L	50	125	8	90	73.4 - 119

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Fluoride	126	mg/L	50	125	8	94	73.4 - 119	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 32786

Date Analyzed: 2006-12-13

Analyzed By: SM

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Ammonia-N		mg/L	5.00	4.70	94	85 - 115	2006-12-13

Standard (CCV-1)

QC Batch: 32786

Date Analyzed: 2006-12-13

Analyzed By: SM

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Ammonia-N		mg/L	5.00	4.93	99	85 - 115	2006-12-13

Standard (CCV-1)

QC Batch: 32862

Date Analyzed: 2006-12-15

Analyzed By: TS

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Mercury		mg/L	0.00100	0.00101	101	80 - 120	2006-12-15

Standard (CCV-2)

QC Batch: 32862

Date Analyzed: 2006-12-15

Analyzed By: TS

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Mercury		mg/L	0.00100	0.00102	102	80 - 120	2006-12-15

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Standard (CCV-1)

QC Batch: 32895

Date Analyzed: 2006-12-16

Analyzed By: JG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Vinyl Chloride		μg/L	50.0	54.8	110	80 - 120	2006-12-16
1,1-Dichloroethene		μ g/L	50.0	50.7	101	80 - 120	2006-12-16
Chloroform		$\mu \mathrm{g}/\mathrm{L}$	50.0	49.4	99	80 - 120	2006-12-16
1,2-Dichloropropane		μg/L	50.0	51.3	103	80 - 120	2006-12-16
Toluene		μ g/L	50.0	47.9	96	80 - 120	2006-12-16
Chlorobenzene		$\mu \mathrm{g/L}$	50.0	51.9	104	80 - 120	2006-12-16
Ethylbenzene		μg/L	50.0	53.9	108	80 - 120	2006-12-16

Standard (CCV-2)

QC Batch: 32895

Date Analyzed: 2006-12-16

Analyzed By: JG

		Units	CCVs True Conc.	CCVs Found	CCVs Percent	Percent Recovery Limits	Date Analyzed
Param	Flag			Conc.	Recovery		
Vinyl Chloride		μg/L	50.0	57.1	114	80 - 120	2006-12-16
1,1-Dichloroethene		μg/L	50.0	51.1	102	80 - 120	2006-12-16
Chloroform		μg/L	50.0	50,8	102	80 - 120	2006-12-16
1,2-Dichloropropane		μg/L	50.0	51.8	104	80 - 120	2006-12-16
Toluene		μg/L	50.0	48.8	98	80 - 120	2006-12-16
Chlorobenzene		μg/L	50.0	51.8	104	80 - 120	2006-12-16
Ethylbenzene		μg/L	50.0	53.8	108	80 - 120	2006-12-16

Standard (ICV-1)

QC Batch: 32903

Date Analyzed: 2006-12-12

Analyzed By: JG

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
pН		s.u.	7.00	6.94	99	98.8 - 101	2006-12-12

Standard (CCV-1)

QC Batch: 32903

Date Analyzed: 2006-12-12

Analyzed By: JG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
рН		s.u.	7.00	6.97	100	98.8 - 101	2006-12-12

Standard (ICV-1)

QC Batch: 32909

Date Analyzed: 2006-12-13

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Report Date: January 5, 2007	Work Order: 6121321	Page Number: 45 of 56
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		11		awater Sump	103		
			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Specific Conductance	^ ^***	μMHOS/cm	1410	1410	100	96.7 - 108	2006-12-13
•				***************************************			
Standard (CCV-1)							
QC Batch: 32909		Date A	Analyzed: 2	2006-12-13		Anal	yzed By: DR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Specific Conductance		μMHOS/cm	1410	1420	100	96.7 - 108	2006-12-13
Standard (ICV-1)							
QC Batch: 32918		Date A	Analyzed:	2006-12-15		Ana	lyzed By: JG
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 105	2006-12-15
Carbonate Alkalinity		mg/L as CaCo3	0.00	240		0 - 105	2006-12-15
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	10.0		0 - 105	2006-12-15
Total Alkalinity	· · · · ·	mg/L as CaCo3	250	250	100	93.7 - 99.9	2006-12-15
Standard (CCV-1)							
QC Batch: 32918		Date A	Analyzed:	Analyzed By: JG			
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 105	2006-12-15
Carbonate Alkalinity		mg/L as CaCo3	0.00	228		0 - 105	2006-12-15
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	20.0	0.0	0 - 105	2006-12-15
Total Alkalinity		mg/L as CaCo3	250	248	99	93.7 - 99.9	2006-12-15
Standard (ICV-1)							
QC Batch: 32994		Date /	Analyzed:	2006-12-20		Anal	lyzed By: RR
		IC.	Vs	ICVs	lCVs	Percent	
		Tre		³ound	Percent	Recovery	Date
Param	Flag	Units Coi		Conc.	Recovery	Limits	Analyzed
Dissolved Silver		mg/L 0.11	25	0.122	98	90 - 110	2006-12-20

Standard (ICV-I)

QC Batch: 32994 Date Analyzed: 2006-12-20 Analyzed By: RR

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TF Groundwater Samples	

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			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent		Date
Param	Flor	Units	Conc.			Recovery Limits	
Dissolved Arsenic	Flag		1.00	Conc. 0.974	Recovery 97	90 - 110	Analyzed 2006-12-20
Dissolved Alseine		mg/L	1.00	0.974	97	90 ~ 110	2000-12-20
Standard (ICV-1)							
QC Batch: 32994			Date Analyzed:	2006-12-20		Ana	lyzed By: RR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Barium		mg/L	1.00	0.986	99	90 - 110	2006-12-20
Standard (ICV-1)							
QC Batch: 32994			Date Analyzed:	2006-12-20		Ana	lyzed By: RR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Cadmium		mg/L	1.00	0.954	95	95 - 105	2006-12-20
OC Datala 22004			Date Analyzed:	2006-12-20		Ana	lyzed By: RR
QC Batch: 32994			•				
QC Baten: 32994			·	ICVs	ICVs	Percent	
QC Baten: 32994			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	ICVs	ICVs Found Conc.	Percent	Percent Recovery Limits	Date Analyzed
`	Flag	Units mg/L	ICVs True	Found		Recovery	Date Analyzed 2006-12-20
Param	Flag		ICVs True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
Param Dissolved Chromium	Flag		ICVs True Conc.	Found Cone. 0.954	Percent Recovery	Recovery Limits 90 - 110	Analyzed
Param Dissolved Chromium Standard (ICV-1)	Flag		ICVs True Conc. 1.00	Found Cone. 0.954	Percent Recovery	Recovery Limits 90 - 110	Analyzed 2006-12-20
Param Dissolved Chromium Standard (ICV-1)	Flag	mg/L	ICVs True Conc. 1.00 Date Analyzed:	Found Cone. 0.954	Percent Recovery 95	Recovery Limits 90 - 110	Analyzed 2006-12-20
Param Dissolved Chromium Standard (ICV-1) QC Batch: 32994 Param	Flag Flag		ICVs True Conc. 1.00 Date Analyzed:	Found Conc. 0.954 2006-12-20 ICVs Found Conc.	Percent Recovery 95	Recovery Limits 90 - 110 Ana Percent	Analyzed 2006-12-20 lyzed By: RR
Param Dissolved Chromium Standard (ICV-1) QC Batch: 32994		mg/L	ICVs True Conc. 1.00 Date Analyzed: ICVs True	Found Conc. 0.954 2006-12-20 ICVs Found	Percent Recovery 95 ICVs Percent	Recovery Limits 90 - 110 Ana Percent Recovery	Analyzed 2006-12-20 lyzed By: RR Date Analyzed
Param Dissolved Chromium Standard (ICV-1) QC Batch: 32994 Param		mg/L Units	ICVs True Conc. 1.00 Date Analyzed: ICVs True Conc.	Found Conc. 0.954 2006-12-20 ICVs Found Conc.	Percent Recovery 95 ICVs Percent Recovery	Recovery Limits 90 - 110 Ana Percent Recovery Limits	Analyzed 2006-12-20 lyzed By: RR Date
Param Dissolved Chromium Standard (ICV-1) QC Batch: 32994 Param Dissolved Copper		mg/L Units	ICVs True Conc. 1.00 Date Analyzed: ICVs True Conc.	Found Conc. 0.954 2006-12-20 ICVs Found Conc.	Percent Recovery 95 ICVs Percent Recovery	Recovery Limits 90 - 110 Ana Percent Recovery Limits 90 - 110	Analyzed 2006-12-20 lyzed By: RR Date Analyzed
Param Dissolved Chromium Standard (ICV-1) QC Batch: 32994 Param Dissolved Copper Standard (ICV-1)		mg/L Units	ICVs True Conc. 1.00 Date Analyzed: ICVs True Conc. 1.00 Date Analyzed:	Found Cone. 0.954 2006-12-20 ICVs Found Cone. 0.976	Percent Recovery 95 ICVs Percent Recovery 98	Recovery Limits 90 - 110 Ana Percent Recovery Limits 90 - 110	Analyzed 2006-12-20 lyzed By: RR Date Analyzed 2006-12-20
Param Dissolved Chromium Standard (ICV-1) QC Batch: 32994 Param Dissolved Copper Standard (ICV-1)		mg/L Units	ICVs True Conc. 1.00 Date Analyzed: ICVs True Conc. 1.00	Found Cone. 0.954 2006-12-20 ICVs Found Cone. 0.976	Percent Recovery 95 ICVs Percent Recovery	Recovery Limits 90 - 110 Ana Percent Recovery Limits 90 - 110 Ana	Analyzed 2006-12-20 lyzed By: RR Date Analyzed 2006-12-20
Param Dissolved Chromium Standard (ICV-1) QC Batch: 32994 Param Dissolved Copper Standard (ICV-1)		mg/L Units	ICVs True Conc. 1.00 Date Analyzed: ICVs True Conc. 1.00 Date Analyzed: ICVs	Found Conc. 0.954 2006-12-20 ICVs Found Conc. 0.976	Percent Recovery 95 ICVs Percent Recovery 98	Recovery Limits 90 - 110 Ana Percent Recovery Limits 90 - 110	Analyzed 2006-12-20 lyzed By: RR Date Analyzed 2006-12-20

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Standard (ICV-1)

QC Batch: 32994

Date Analyzed: 2006-12-20

Analyzed By: RR

			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Selenium		mg/L	1.00	0.970	97	90 - 110	2006-12-20

Standard (ICV-1)

QC Batch: 32994

Date Analyzed: 2006-12-20

Analyzed By: RR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Zinc		mg/L	1.00	1.00	100	90 - 110	2006-12-20

Standard (CCV-1)

QC Batch: 32994

Date Analyzed: 2006-12-20

Analyzed By: RR

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Silver		mg/L	0.125	0.121	97	90 - 110	2006-12-20

Standard (CCV-1)

QC Batch: 32994

Date Analyzed: 2006-12-20

Analyzed By: RR

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Arsenic		mg/L	1.00	0.929	93	90 - 110	2006-12-20

Standard (CCV-1)

QC Batch: 32994

Date Analyzed: 2006-12-20

Analyzed By: RR

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Barium		mg/L	1.00	0.959	96	90 - 110	2006-12-20

Standard (CCV-1)

QC Batch: 32994

Date Analyzed: 2006-12-20

Dissolved Zinc

mg/L

1.00

0.982

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<u></u>			HELSTF Gro	oundwater Sam	ples		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Cadmium		mg/L	1.00	0.928	93	90 - 110	2006-12-20
	····						
Standard (CCV-1)							
QC Batch: 32994			Date Analyzed:	2006-12-20		Ana	lyzed By: RR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Chromium		mg/L	1.00	0.923	92	90 - 110	2006-12-20
Standard (CCV-1)							
QC Batch: 32994			Date Analyzed:	2006-12-20		Ana	lyzed By: RR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Copper		mg/L	1.00	0.952	95	90 - 110	2006-12-20
Standard (CCV-1) QC Batch: 32994			Date Analyzed:	2006-12-20		Ana	lyzed By: RR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Lead		mg/L	1.00	0.966	97	90 - 110	2006-12-20
Standard (CCV-1)							
QC Batch: 32994			Date Analyzed:	2006-12-20		Ana	lyzed By: RR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Selenium		mg/L	1.00	0.955	96	90 - 110	2006-12-20
Standard (CCV-1)							
QC Batch: 32994			Date Analyzed:	2006-12-20		Ana	lyzed By: RR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Zinc		ma/I	1.00	0.082	08	00 110	2006 12 20

98

90 - 110

2006-12-20

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Standard (ICV-1)

QC Batch: 33006

Date Analyzed: 2006-12-15

Analyzed By: WB

			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Nitrate-N		mg/L	2.50	2.58	103	90 - 110	2006-12-15

Standard (ICV-1)

QC Batch: 33006

Date Analyzed: 2006-12-15

Analyzed By: WB

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	12.5	12.2	98	90 - 110	2006-12-15
Sulfate		mg/L	12.5	13.0	104	90 - 110	2006-12-15

Standard (CCV-1)

QC Batch: 33006

Date Analyzed: 2006-12-15

Analyzed By: WB

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Nitrate-N		mg/L	2.50	2.72	109	90 - 110	2006-12-15

Standard (CCV-1)

QC Batch: 33006

Date Analyzed: 2006-12-15

Analyzed By: WB

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	12.5	13.0	104	90 - 110	2006-12-15
Sulfate		mg/L	12.5	13.7	110	90 - 110	2006-12-15

Standard (ICV-1)

QC Batch: 33035

Date Analyzed: 2006-12-21

Analyzed By: RR

			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Sodium		mg/L	50.0	52.0	104	90 - 110	2006-12-21

Standard (CCV-1)

QC Batch: 33035

Date Analyzed: 2006-12-21

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			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Sodium	***************************************	mg/L	50.0	54.0	108	90 - 110	2006-12-21

Standard (ICV-1)

QC Batch: 33073

Date Analyzed: 2006-12-22

Analyzed By: JG

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Dissolved Solids		mg/L	1000	1000	100	94.4 - 106	2006-12-22

Standard (CCV-1)

QC Batch: 33073

Date Analyzed: 2006-12-22

Analyzed By: JG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Dissolved Solids		mg/L	1000	977	98	94.4 - 106	2006-12-22

Standard (CCV-1)

QC Batch: 33096

Date Analyzed: 2006-12-20

Analyzed By: JG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Vinyl Chloride		μg/L	50.0	45.4	91	80 - 120	2006-12-20
1,1-Dichloroethene		$\mu { m g/L}$	50.0	47.3	95	80 - 120	2006-12-20
Chloroform		$\mu \mathrm{g}/\mathrm{L}$	50.0	46.2	92	80 - 120	2006-12-20
1,2-Dichloropropane		μ g/L	50.0	47.1	94	80 - 120	2006-12-20
Toluene		$\mu \mathrm{g}/\mathrm{L}$	50.0	44,4	89	80 - 120	2006-12-20
Chlorobenzene		μg/L	50.0	47.0	94	80 - 120	2006-12-20
Ethylbenzene		μg/L	50.0	48.5	97	80 - 120	2006-12-20

Standard (ICV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Analyzed By: RR

			ICVs True	ICVs Found	ICVs Percent	Percent	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Recovery Limits	Analyzed
Total Silver		mg/L	0.125	0.127	102	90 - 110	2006-12-26

Standard (ICV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

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7	HELSTF Groundwater Samples	

				O Distribution 5		······	
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1.00	1.00	100	90 - 110	2006-12-26
Standard (ICV-1)							
QC Batch: 33098			Date Analyz	zed: 2006-12-2	26	Ana	lyzed By: RR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Barium		mg/L	1.00	1.01	101	90 - 110	2006-12-26
Standard (ICV-I)							
QC Batch: 33098			Date Analy:	zed: 2006-12-2	26	Ana	lyzed By: RR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Cadmium		mg/L	1.00	0.971	97	90 - 110	2006-12-26
Standard (ICV-1) QC Batch: 33098			Date Analy:	zed: 2006-12-2	26	Ana	llyzed By: RR
			ICVs	ICVs	ICVs	Percent	
			ICVs Truc	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units					Date Analyzed
	Flag	Units mg/L	Truc	Found	Percent	Recovery	Analyzed
Param Total Chromium Standard (ICV-1)	Flag		True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Total Chromium Standard (ICV-1)	Flag		True Conc.	Found Conc. 0.967	Percent Recovery 97	Recovery Limits 90 - 110	Analyzed
Total Chromium Standard (ICV-1)	Flag		True Conc. 1.00 Date Analy	Found Conc. 0.967 zed: 2006-12-	Percent Recovery 97 26	Recovery Limits 90 - 110	Analyzed 2006-12-26
Total Chromium Standard (ICV-1) QC Batch: 33098		mg/L	True Conc. 1.00 Date Analy ICVs True	Found Conc. 0.967 zed: 2006-12- ICVs Found	Percent Recovery 97 26 ICVs Percent	Recovery Limits 90 - 110 Ana Percent Recovery	Analyzed 2006-12-26 slyzed By: RR Date
Total Chromium Standard (ICV-1) QC Batch: 33098 Param	Flag Flag	mg/L Units	True Conc. 1.00 Date Analy ICVs True Conc.	Found Conc. 0.967 zed: 2006-12- ICVs Found Conc.	Percent Recovery 97 26 ICVs Percent Recovery	Recovery Limits 90 - 110 Ana Percent Recovery Limits	Analyzed 2006-12-26 alyzed By: RR Date Analyzed
Total Chromium Standard (ICV-1) QC Batch: 33098 Param		mg/L	True Conc. 1.00 Date Analy ICVs True	Found Conc. 0.967 zed: 2006-12- ICVs Found	Percent Recovery 97 26 ICVs Percent	Recovery Limits 90 - 110 Ana Percent Recovery	Analyzed 2006-12-26 slyzed By: RR Date
Total Chromium Standard (ICV-1) QC Batch: 33098 Param Total Copper		mg/L Units	True Conc. 1.00 Date Analy ICVs True Conc.	Found Conc. 0.967 zed: 2006-12- ICVs Found Conc.	Percent Recovery 97 26 ICVs Percent Recovery	Recovery Limits 90 - 110 Ana Percent Recovery Limits	Analyzed 2006-12-26 alyzed By: RR Date Analyzed
Total Chromium Standard (ICV-1) QC Batch: 33098 Param Total Copper Standard (ICV-1)		mg/L Units	True Conc. 1.00 Date Analy ICVs True Conc.	Found Conc. 0.967 zed: 2006-12-1 ICVs Found Conc. 1.00	Percent Recovery 97 26 ICVs Percent Recovery 100	Recovery Limits 90 - 110 Ana Percent Recovery Limits 90 - 110	Analyzed 2006-12-26 alyzed By: RR Date Analyzed
Total Chromium		mg/L Units	True Conc. 1.00 Date Analy: ICVs True Conc. 1.00	Found Conc. 0.967 zed: 2006-12-1 ICVs Found Conc. 1.00	Percent Recovery 97 26 ICVs Percent Recovery 100	Recovery Limits 90 - 110 Ana Percent Recovery Limits 90 - 110	Analyzed 2006-12-26 slyzed By: RR Date Analyzed 2006-12-26
Total Chromium Standard (ICV-1) QC Batch: 33098 Param Total Copper Standard (ICV-1)		mg/L Units mg/L	True Conc. 1.00 Date Analys ICVs True Conc. 1.00	Found Conc. 0.967 zed: 2006-12-1 ICVs Found Conc. 1.00	Percent Recovery 97 26 ICVs Percent Recovery 100	Recovery Limits 90 - 110 Ana Percent Recovery Limits 90 - 110 Ana Percent Recovery	Analyzed 2006-12-26 slyzed By: RR Date Analyzed 2006-12-26
Total Chromium Standard (ICV-1) QC Batch: 33098 Param Total Copper Standard (ICV-1)		mg/L Units	True Conc. 1.00 Date Analys ICVs True Conc. 1.00 Date Analy	Found Conc. 0.967 zed: 2006-12-1 ICVs Found Conc. 1.00 zed: 2006-12-1 ICVs	Percent Recovery 97 26 ICVs Percent Recovery 100 26 ICVs	Recovery Limits 90 - 110 Ana Percent Recovery Limits 90 - 110 Ana Percent	Analyzed 2006-12-26 alyzed By: RR Date Analyzed 2006-12-26

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Standard (ICV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Analyzed By: RR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Lead		mg/L	1.00	1.02	102	90 - 110	2006-12-26

Standard (ICV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Analyzed By: RR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Selenium	· · · · · · · · · · · · · · · · · · ·	mg/L	1.00	0.983	98	90 - 110	2006-12-26

Standard (ICV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Analyzed By: RR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Zinc		mg/L	1.00	1.04	104	90 - 110	2006-12-26

Standard (CCV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Analyzed By: RR

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Silver		mg/L	0.125	0.120	96	90 - 110	2006-12-26

Standard (CCV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Analyzed By: RR

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Arsenic		mg/L	1.00	0.914	91	90 - 110	2006-12-26

Standard (CCV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Param

Total Lead

Flag

Units

mg/L

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	CCV	CCV	CCX	75

					-P-1-0		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Barium		mg/L	1.00	0.952	95	90 - 110	2006-12-26
Standard (CCV-1)							
QC Batch: 33098			Date Analyze	d: 2006-12-26		Ana	alyzed By: RR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc,	Recovery	Limits	Analyzed
Total Cadmium		mg/L	1.00	0.917	92	90 - 110	2006-12-26
Standard (CCV-1)							
QC Batch: 33098			Date Analyze	d: 2006-12-26		Ana	alyzed By: RR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Chromium		mg/L	1.00	0.907	91	90 - 110	2006-12-26
Standard (CCV-1)							
QC Batch: 33098			Date Analyze	d: 2006-12-26		Ana	ılyzed By: RR
			CCVs	CCVs	CCVs	D	
			True	Found	Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Copper	1 1115	mg/L	1.00	0.932	93	90 - 110	2006-12-26
Standard (CCV-1)							
QC Batch: 33098			Date Analyze	d: 2006-12-26		Ana	nlyzed By: RR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Phosphorous		mg/L	5.00	4.60	92	90 - 110	2006-12-26
Standard (CCV-1)							
QC Batch: 33098			Date Analyze	d: 2006-12-26		Ana	alyzed By: RR
				a. a			

 CCVs

True

Conc.

1.00

 CCVs

Found

Conc.

0.959

CCVs

Percent

Recovery

96

Percent

Recovery

Limits

90 - 110

Date

Analyzed

2006-12-26

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Standard (CCV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Analyzed By: RR

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Selenium		mg/L	1.00	0.947	95	90 - 110	2006-12-26

Standard (CCV-1)

QC Batch: 33098

Date Analyzed: 2006-12-26

Analyzed By: RR

			CCVs True		CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Zinc		mg/L	1.00	0.971	97	90 - 110	2006-12-26

Standard (ICV-1)

QC Batch: 33125

Date Analyzed: 2006-12-27

Analyzed By: RR

			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Sodium		mg/L	50.0	51.7	103	90 - 110	2006-12-27

Standard (CCV-1)

QC Batch: 33125

Date Analyzed: 2006-12-27

Analyzed By: RR

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Sodium		mg/L	50.0	48.6	97	90 - 110	2006-12-27

Standard (ICV-1)

QC Batch: 33128

Date Analyzed: 2006-12-26

Analyzed By: JS

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Nitrate and Nitrite as N		mg/L	0.160	0.181	113	85 - 115	2006-12-26

Standard (CCV-1)

QC Batch: 33128

Date Analyzed: 2006-12-26

Analyzed By: JS

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	HELSTF Groundwater Samples		

·····									
				CCVs	CCVs	CCVs	Percent		
				True	Found	Percent	Recovery	Date	
Param		Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Nitrate and Ni	trite as N		mg/L	0.160	0.149	93	85 - 115	2006-12-26	
Standard (IC	V-1)								
QC Batch: 3	•		Date	Analyzed:	2006-12-23	7	Anal	yzed By: WB	
`				•				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
			ICVs		CVs	ICVs	Percent		
_			True		ound	Percent	Recovery	Date	
Param	Flag	Units	Conc.		onc.	Recovery	Limits	Analyzed	
Bromide		mg/L	5.00	5	.03	101	90 - 110	2006-12-27	
Standard (IC	V-1)								
QC Batch: 33182			Date Analyzed: 2006-12-27				Analyzed By: WB		
			ICVs	1,	CVs	ICVs	Percent		
			True		ound	Percent	Recovery	Date	
Param	Flag	Units	Conc.		onc.	Recovery	Limits	Analyzed	
Nitrite-N	1765	mg/L	1.13		1.23	109	90 - 110	2006-12-27	
QC Batch: 33182		Date Analyzed: 2006-12-27				Analyzed By: WB			
			ICVs	I	CVs	ICVs	Percent		
			True		ound	Percent	Recovery	Date	
Param	Flag	Units	Conc.		onc.	Recovery	Limits	Analyzed	
Fluoride		mg/L	5.00		.88	98	90 - 110	2006-12-27	
Standard (CC	CV-1)								
QC Batch: 33182			Date Analyzed: 2006-12-27				Analyzed By: WB		
			CCVs	C	CVs	CCVs	Percent		
			True		ound	Percent	Recovery	Date	
Param	Flag	Units	Conc.		one.	Recovery	Limits	Analyzed	
Bromide		mg/L	2.50		2.55	102	90 - 110	2006-12-27	
Standard (CC	'V-1)								
QC Batch: 3	•		Date	Analyzed	2006-12-21	7	Anal	yzed By: WB	
				•				, 200 25, 1715	
			CCVs		CVs	CCVs	Percent		
			True		ound	Percent	Recovery	Date	
Param Nitrite-N	Flag	Units	Conc.		Conc.	Recovery	Limits	Analyzed	
		mg/L	2.50		2.45	98	90 - 110	2006-12-27	

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Standard (CCV-1)

QC Batch: 33182

Date Analyzed: 2006-12-27

Analyzed By: WB

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Fluoride		mg/L	2.50	2.60	104	90 - 110	2006-12-27